

**Executive
Guide to
Banking
Solutions in
South Asia**

Research
Analysis
Communication
Action

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The
New
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Group



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About This Executive Guide

This Executive Guide presents a summary of research findings into an area of current and vital interest to executive decision makers. It provides key pointers for decision makers who require:

- A snapshot of current trends
- A summary of the most recent research
- A guide to some of the leading information technology suppliers

This is one of a series of INPUT guides covering the following IT and business sectors:

- Electronic Commerce
- Electronic Banking
- Electronic Government
- Enterprise Application Solutions
- Internet & Intranet
- IT Customer Services & Support
- IT Operational Services

About INPUT

Information Technology (IT) decision makers throughout the world rely on INPUT for data, research, objective analysis and insightful opinions to:

- Ensure an effective investment strategy
- Evaluate and select suppliers
- Save time in evaluating industry developments
- Avoid problems encountered by other organizations

Since its founding in 1974, INPUT's focus in the IT software and services industry has helped many of the world's leading companies to make key decisions not just about technology itself but, more importantly, about the application of technology to their specific business needs.

About The New Century Group

The New Century Group acts as a strategic marketing partner to its clients, helping them understand and address opportunities in Asia Pacific's information technology and telecommunications markets.

The New Century Group provides an understanding of opportunities, insight into emerging markets and answers to pressing questions. The New Century Group helps customers to understand, anticipate and address opportunities.

The New Century Group understands that quality market information and insightful market analysis provide a competitive advantage that can mean the difference between success and failure in Asia Pacific's challenging markets. It is a fast-paced firm, responding quickly to the changing needs of Asia Pacific's dynamic information technology market.

Through its team of experienced analysts located in every major country market in the region, The New Century Group is able to deliver quality data and insightful analysis. With The New Century Group, customers are assured of getting quality in the depth of information provided and consistency in the geographic breadth of coverage.

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See inside back cover for more information on INPUT's services.

See back cover for details of INPUT and The New Century Group offices.

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**Executive
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Executive Summary

Technology has become an essential and integral part of banking. This is as true in South Asia as elsewhere in the world. As a result, banks and financial institutions in Asia are looking increasingly to information technology to give them a competitive edge.

With technology so vitally important to Asian financial institutions, the days in which banks developed their own applications and systems are fading quickly into the past. Instead, they are turning to state-of-the-art packaged applications and solutions. Specifically, banks and financial institutions are turning to banking solution vendors to help them:

- Implement integrated, leading edge retail banking systems
- Improve the management and appearance of documentation
- Better manage risk
- Improve customer relations management
- Better identify and understand opportunities
- Improve credit card services
- Introduce Internet banking services

The use of leading edge banking solutions will be a major factor in the future competitiveness of banks in South Asia. Those that take the lead in making the most of available technology will gain market share and advantage in an increasingly competitive market. Those satisfied with the status quo will be left behind, or disappear altogether.

Key Challenges: Consolidation, Profitability and Technology

The senior business executives surveyed were asked about the key challenges currently facing their organizations (see Exhibits I and II). The challenges currently facing South Asia's financial institutions, according to their CEOs, fall into three areas:

Consolidation: South Asia's banking/finance industry is undergoing considerable restructuring and consolidation. Mergers and acquisitions are on the minds of most senior banking executives in the region, especially in Malaysia and the Philippines. Mergers

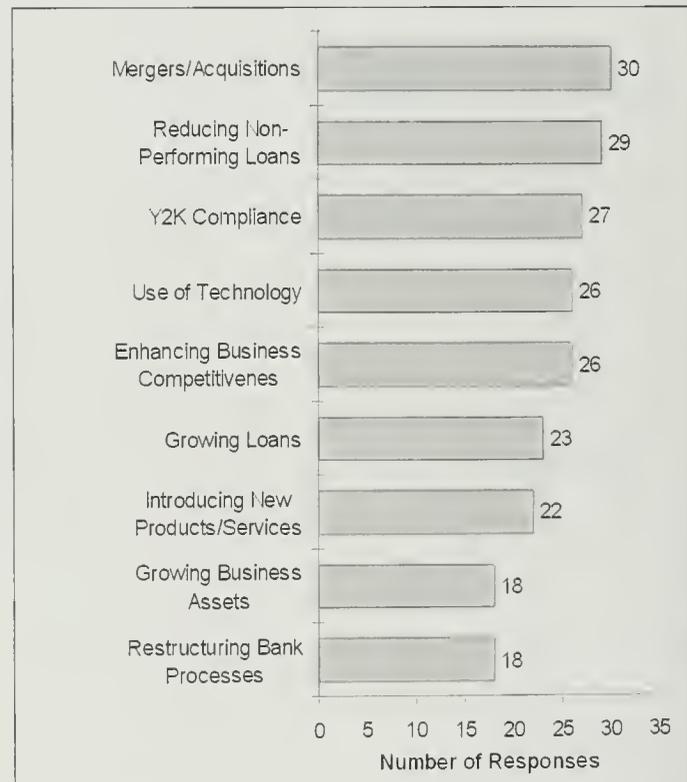
and acquisitions was the most often mentioned challenge among the 150 CEOs interviewed across the region.

Profitability & Assets: Financial institutions in South Asia are under tremendous pressure to improve their financial position. They are looking to increase both profitability and assets. One key area of focus is in loans, where banks are looking to reduce non-performing loans on one hand while growing the number of performing loans on the other hand. Improving profitability and competitiveness was of particular concern among senior executives in Indonesia, the Philippines, Thailand and Malaysia.

Technology: Ensuring that their organization is making the most of available technology and leveraging new technologies is of growing concern to CEOs at financial institutions in South Asia. Significantly, two of the five most frequently mentioned concerns were technology specific (see Exhibit I). Effectively using and implementing technology was especially noted as a challenge by CEOs in India and the Philippines.

Exhibit I

Key Challenges Facing South Asian Financial Institutions



Note: Multiple Mentions

Sample: 150 CEOs Surveyed

Source: The New Century Group

Exhibit II

Key Challenges Facing South Asian Financial Institutions (by Country)

Key Challenge	Mentions (%)
INDIA	
Use of Technology	40%
Enhancing Business Competitiveness	32%
Introducing New Products & Services	32%
Customer Satisfaction	20%
Reducing Non-Performing Loans/Assets	16%
INDONESIA	
Enhancing Profit	64%
Re-Capitalization	48%
Reducing Non-Performing Loans/Assets	32%
Enhancing Efficiency/Productivity	24%
Improving Credit/Lending Quality	12%
MALAYSIA	
Mergers/Acquisitions	60%
Year 2000 Compliance	36%
Restructuring Bank Process	32%
Growing Business Assets	28%
Enhancing Shareholder Value	20%
PHILIPPINES	
Growing Loans	48%
Use of Technology	28%
Year 2000 Compliance	28%
Mergers/Acquisitions	24%
Growing Assets	24%
SINGAPORE	
Year 2000 Compliance	24%
Restructuring Bank Processes	16%
Enhancing Competitiveness	16%
Growing Loans	16%
Mergers/Acquisitions	12%
THAILAND	
Enhancing Business Competitiveness	32%
Reducing Non-Performing Loans	24%
Use of Technology	24%
Introducing New Products/Services	16%
Growing Deposits	16%

Of particular concern to these institutions, with the year 2000 only months away, is ensuring that their institutions are year 2000 compliant. Many institutions are almost hopelessly behind in ensuring compliance and are scrambling to be ready.

While technology was mentioned frequently when talking with CEOs about the key challenges that they face, it was even more frequently mentioned when discussing the specific actions they had in mind to address those challenges.

Specific actions that banking CEOs have in mind to address the key challenges facing their organizations include:

- Improved analysis of non-performing loan customers
- Better analysis and management reporting
- Improving available customer information
- Consolidation of disparate IT systems
- Using technology to improve customer services
- Updating technology, systems and applications
- Enhanced management information
- Expanding delivery channels using the Internet, automatic teller machines (ATMs) and kiosks
- Introducing state-of-the-art technology to help reduce operating costs

These institutions are looking to information technology to help them better understand customer needs, manage risk, identify opportunities, deliver services to customers, reduce costs, improve efficiency and better manage their business.

A Fast-Paced Industry Expanding to Address Opportunities

Despite the challenges, or possibly because of them, this study found that most banks and financial institutions in South Asia have aggressive expansion plans. Specific plans vary by country (see Exhibit III on the next page), but most are looking at expanding their core services, developing new services or expanding their network of branch offices.

Note: Multiple Mentions

Sample: 150 CEOs Surveyed

Source: The New Century Group

Exhibit III

Planned Areas of Business Expansion or Development (by Country)

INDIA

- Consumer/Retail Banking
- Corporate Banking
- Fee-Based Income
- Lending
- Internet banking

INDONESIA

- Consumer/Retail banking
- Customer Base
- Trade Financing
- Lending
- ATM Network

MALAYSIA

- Retail Branch Network
- Lending
- New Industries/Areas
- Consumer/Retail Banking
- Corporate Banking

PHILIPPINES

- Consumer/Retail Banking
- Retail Branch Network
- Lending
- New Industries/Areas
- Corporate Banking

SINGAPORE

- Telephone Banking
- Internet Banking
- Private Banking
- Consumer/Retail Banking
- Lending

THAILAND

- Lending
- Consumer/Retail Banking
- Internet Banking
- Telephone Banking
- Trade Financing

Discussions with CEOs on expansion plans found that technology was a critical component of their expansion plans. Implementing quality IT solutions is a key part of plans to add services, expand branch networks and develop new delivery channels. It is also an obviously essential part of new opportunities in Internet banking and telephone banking.

Given the importance of information technology to financial institutions in South Asia, they are placing a high priority on integrating IT into the very fabric of the business. Banks across the region are looking to align the objectives of their IT organization with those of the business, as well as to improve business processes through IT initiatives (see Exhibit IV).

Using IT, financial institutions are looking to quickly identify and understand areas where profitability can be improved and risk avoided, as well as improving the management of knowledge and information within the organization.

Replacing older, obsolete systems with newer, leading edge systems is also a priority area, although this is tied partly to efforts to ensure Year 2000 compliance.

Interestingly, taking full advantage of the Internet was given quite a low ranking by the financial institutions across the region. Most seem to be taking a 'wait and see' attitude, although it is likely to result in lost opportunity.

Exhibit IV

Priority Areas for South Asian Financial Institutions

Priority/Concern	Rating
Aligning IT and Corporate Objectives	4.4
Improving Business Processes Through IT Initiatives	4.4
Reducing Transaction Processing Costs	4.2
Better Understanding Areas for Improved Profitability	4.1
Better Understanding Areas for Improved Risk Management	4.0
Improving Knowledge Management Within the Organization	4.0
Replacing Obsolete Systems	3.9
Ensuring That IT Capabilities Are Better Than Competition	3.7
Reducing Time-to-Market for Products/Services	3.6
Taking Full Advantage of the Internet	3.2

*Note: 0=not a priority; 5=extremely high priority
 Sample: 150 Organizations Source: The New Century Group*

Sample: 150 CEOs Surveyed Source: The New Century Group

Interestingly, reducing transaction costs was given a high priority while reducing overall IT costs was given a very low priority. There seems to be a growing recognition of the importance of investing in IT, and the importance of such investments to future competitiveness, and even survival. Banks seem willing to spend money on information technology if that spending will, in turn, result in even more significant efficiencies and cost savings.

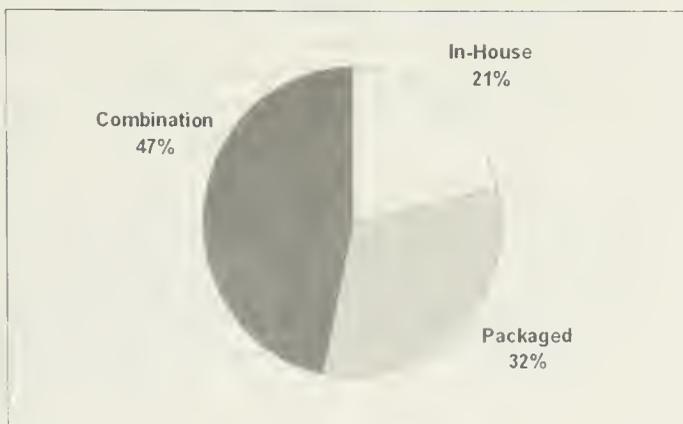
This study also found that a shift has taken place in how financial institutions are spending their IT dollar, peso, rupee, rupiah, ringgit and baht. Instead of relying on bespoke applications developed by in-house resources, they are turning to state-of-the-art packaged solutions. With the ever-quickening pace of change and the importance of technology in providing a competitive edge, applications developed by in-house resources are simply unable to keep pace. Packaged solutions can be implemented much faster than custom-built applications.

The preference among the banks and financial institutions surveyed is for packaged solutions, and this trend is gaining momentum.

As shown in Exhibit V, about a third of the CIOs/IT Directors surveyed stated a preference for packaged solutions. Only about a fifth indicated a preference for in-house developed applications. Because most of the organizations still have legacy systems and applications that are being used, nearly half the CIOs/IT Directors interviewed expressed a preference for a combination of packaged solutions and in-house developed applications. The thinking is to use packaged solutions for mission-critical areas where speed and leading edge capabilities are needed, while continuing to use existing in-house applications in other areas.

Exhibit V

Preferred Source of Applications



Sample: 150 CIOs Surveyed

Source: The New Century Group

It is an expanding cycle. The greater reliance on third-party packaged solutions has resulted in greater choices, more sophistication and greater flexibility in the solutions available on the market. This, in turn, leads to further improvements and even greater choice.

Expect to see most banks relying on packaged solutions for their information technology needs. Expect to see the others increasingly at a competitive disadvantage.

Focus on Customers, Profits, and Efficiency is Driving Interest in Banking Solutions

This study identified several key areas where banking solutions are helping financial institutions in South Asia to gain a competitive edge. These include:

- Core Banking
- Customer Relationship Management
- Document Management
- Credit Card Management
- Risk Management
- Internet / Electronic Banking

The drive on the part of banks in South Asia to expand and improve customer services, arising out of a much more competitive environment, is a key factor in the growth of all these areas.

Core Banking

Core banking applications, particularly retail banking applications, are a priority area for most banks across South Asia. Banks in every country are looking to become more competitive, add more services, improve efficiency and gain market share. South Asian banks recognize that they need the right core applications if they are going to achieve this.

Many banks are upgrading the functionality of their core applications as part of changes or re-engineering to improve competitiveness and profitability. They are looking seriously at third-party solutions as a means of quickly and inexpensively adding the needed functionality, with many commenting that feasibility studies are in progress.

Helping to drive the need for additional functionality are the fundamental changes taking place in the banking markets across South Asia. In Indonesia,

many corporate banks are moving into retail banking. In Thailand, personal banking services are the hot new trend among banks as they look to generate more revenues from consumer banking. In the Philippines, growing competition has forced banks to improve existing services while adding new ones. It has also forced them to explore new ways of doing business, such as electronic and telephone banking. In India, rapid growth in the ATM network is starting to occur and new private sector banks are creating higher consumer expectations as a result of new consumer-oriented services.

The Internet has created additional challenges for banks and additional functionality requirements for their core applications. The banks surveyed spoke of the need to quickly web-enable their applications, and also spoke of the enormous effort that is necessary to achieve this. This is especially challenging for old applications where such capabilities were never envisioned at the time they were developed.

Across South Asia, this study found many banks with old systems that are looking to upgrade to newer, more efficient systems. Some banks spoke of core applications that are over 15, or even 20 years old. Other banks spoke of core applications that are plagued by problems including poor response times, lots of bugs, a lack of integration and higher costs due to the use of older technology.

These banks have been reluctant to upgrade to newer, better banking solutions because of concerns about the need to re-engineer their processes. However, competition and market changes are putting these banks in a situation where they will need to upgrade their systems AND re-engineer their processes if they are going to survive.

Amazingly, many banks are still in the process of automating manual processes. Banks, particularly in Malaysia and the Philippines, talked of processes that are still done manually and branches that are still not fully computerized. These banks realize the need to fix these problems and to make better use of information technology so as to improve efficiency.

As noted earlier, mergers and acquisitions are also a significant factor in the South Asian finance industry. Most banks in South Asia are looking at ways to make themselves more efficient. Alliances or mergers are seen as a means of becoming stronger and enhancing market presence. Where mergers have been agreed, many are evaluating their core applications and taking best-of-breed capabilities from the two merging institutions to synergize operations and standardize on a common platform.

Banks need to quickly adapt their processes and core applications to the changing market and environment. Many are turning to package banking solutions as a means to quickly implement new functionality and state-of-the-art capabilities.

Customer Relationship Management

With banks focusing more on the customer, it is not surprising that banks are recognizing the need for better customer relationship management. There is growing interest by South Asian banks in central databases, data warehousing, business intelligence and customer relationship management solutions.

In the past, Asian banks have often focused their customer relationship activities around key customers and emphasizing the 'human touch'. Now, there seems to be a growing recognition of the need for good and readily available customer information to help improve customer relationship activities. This is particularly important as banks seek to extend their customer base while also improving profitability. The best and most profitable customers need to be identified and steps taken to ensure their loyalty.

Document Management

Many banks across South Asia still rely heavily on paper as their primary storage and retrieval media, and have been slow to move to the electronic storage and retrieval of information. The distribution of reports and statements, both internally and externally, has changed little for many banks in South Asia over the last 20 years despite the dramatic leaps in document management technology that have occurred in the time.

Document management solutions provide competitive advantages in three key areas:

Improved customer service: Document management solutions help financial institutions improve customer service levels, often with dramatic results. For example, copies of past customer statements can be provided in a matter of minutes or hours instead of days, weeks or months.

Banks seeking to significantly improve the quality of their customer service invariably find themselves addressing this important area. As noted above, improving customer service and building customer loyalty is of growing importance to South Asian banks.

Improved efficiency: Banking revolves around documents, whether they be cheques, statements, passbooks, internal reports or applications. Document management solutions, by their very definition, help banks better manage documents, workflow and output.

Improved corporate image: With growing competition and a greater focus on profitability banks are paying greater attention to their image, perception and brand name in the market, especially the consumer market.

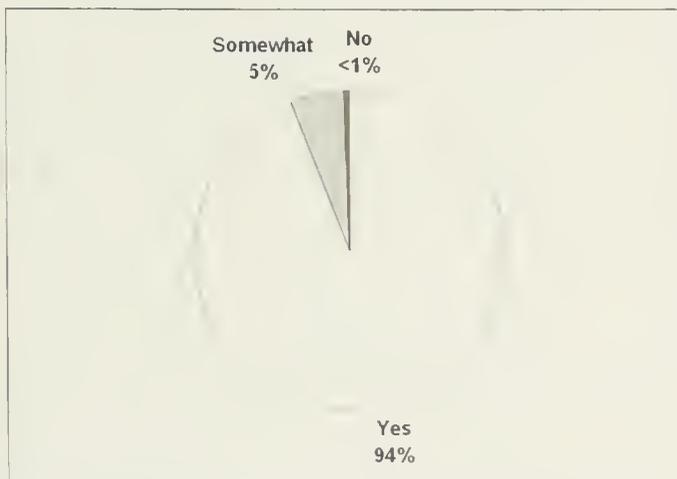
All but one of the 150 CEOs interviewed for this study agreed that the documentation provided to customers, in the form of statements, letters, etc., has a significant impact on their perception of the institution (see Exhibit VI).

While almost all of the CEOs surveyed felt that customer documentation had an impact on customer perceptions, only about half were satisfied with the quality of their customer documentation.

Some banks are taking steps to ensure that their customer documentation presents their institution as a modern, sophisticated bank that cares about the customer. Others reinforce the opposite perception with document provided to customers. In the increasingly competitive financial markets of South Asia, building and reinforcing a strong, positive image will be critical to success, if not survival.

Exhibit VI

Would You Agree that Customer Documentation Impacts the Perception Your Customers Have of Your Institution?



Sample: 150 CEOs Surveyed

Source: The New Century Group

Credit Card Management

Credit card management is one area where banks in South Asia are especially reliant on packaged solutions. This seems to be at least partly due to the requirements and demands of international credit card companies.

With the use of credit cards in the region on the rise, the importance of credit card management solutions to banks in the region is expected to also rise.

Risk Management

Over the past two years, banks across South Asia have gained a renewed appreciation for risk management. Banks across the region have been battered by non-performing loans, highlighted by the fact that it was of the two most frequently mentioned challenges facing financial institutions in South Asia (see Exhibit I, on page 2).

As a result, the need to better understand and evaluate risk has become a priority area for banks (see Exhibit IV, on page 4). Most of the banks surveyed indicated they are planning to implement or have already implemented plans to improve risk management.

The challenge for many banks is a lack of familiarity with risk management. Many have not automated the process; some even lack good processes. Risk management solutions help banks to not only address this area quickly, but to also leap-frog to a world-class standard.

Internet Banking, Electronic Banking & Electronic Commerce

As shown in Exhibit IV, on page 4, taking full advantage of the Internet is not a high priority area for banks in South Asia. In fact, many banks seem uncertain or confused by Internet banking. Many feel it has a promising future but limited, near-term, tangible benefits. Their approach is to move cautiously and carefully.

At present, a relatively small number of banks in each country are building leadership positions in this area.

With speed of critical importance and expertise often difficult to find, banks are increasingly looking at packaged solutions as a means of addressing this area. As more banks recognize the need to offer electronic or Internet banking services, the importance of packaged solutions to banks in South Asia will rise proportionately.

Electronic commerce is another important, yet often confusing, area of opportunity for banks and financial institutions in South Asia. The potential benefits to banks from the growth of electronic commerce are enormous, and many in South Asia are already reaping the benefits. These include dramatically reduced transaction costs, improved customer service and loyalty, and better customer information.

Banks and financial institutions in the vanguard of electronic commerce are also reaping benefits from helping businesses handle payments and financial transactions in an electronic commerce environment. Banks offering such capabilities and services are gaining customers, at the expense of those that are not.

Banks are not only important beneficiaries of electronic commerce activity, but are also important enablers. Banks are important to general trade and commerce, and even more important to electronic commerce. Unfortunately, the wait-and-see approach of many banks is slowing the growth of electronic commerce in the region.

Summary

In summary, economic change, deregulation and competition are forcing banks in South Asia to focus on customer service, innovation and profitability. To ensure that they can maintain customer loyalty, gain a competitive edge and meet the challenges of a changing market, banks need to have a supporting technology infrastructure. As banks in South Asia search for ways to gain state-of-the-art capabilities that can give them an edge in the market, the best option for most will be in packaged banking solutions.

Profiles

Profiles of Selected Banking Solution Providers in South Asia

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Company Background

Citicorp Information Technology Industries Limited (CITIL), an affiliate of Citicorp, specializes in providing software solutions to the financial services industry worldwide. It provides a wide range of sophisticated and integrated solutions for retail banking, corporate banking, investment banking, and mutual funds, using current technologies such as Data Warehousing and the World Wide Web. CITIL is a global player with over 200 financial institutions as its customers spanning 60 countries in the Americas, Europe, Middle East, Africa and Asia Pacific.

CITIL is an SEI CMM Level 4 company, placing it among the top 3% of companies assessed worldwide and the first banking and financial software company in the world to achieve this distinction. This was possible because of its strong emphasis on software engineering processes and commitment to quality. CITIL also provides consulting services and solutions in the area of software process maturity and quality management.

Besides eleven Regional Support Centres worldwide, CITIL has a Global Support Centre based in India offering back-up support round the clock. Its close alliances with leading hardware and software vendors ensure that its solutions remain technologically current and widely available.

CITIL has an employee strength of over 950 – comprising Consultants from the Banking and Finance Industry, IT consultants and recruits from the best Technology and Management institutes. Regular, comprehensive training ensures that Management and staff are abreast of the latest trends and developments in the areas of technology, banking and management.

CITIL has a long and successful track record in implementing and supporting banking solutions. Its unique SEI CMM Level 4 capabilities offer its customers a high degree of reliability and an assurance of timely completion of the projects as per the planned deadlines. This rewarding and reliable partnership continues to provide the edge that the customers need in the demanding marketplace.

CITIL's CEO, R. Ravisankar says, "Our mission is to enable Financial Institutions worldwide achieve excellence and competitive edge through effective use of Information Technology. Today, for a company of our age, we've made significant strides, successfully establishing our brand name in the international banking community". CITIL's success is evident from its large and diverse customer base and the fact that customers continue their partnership with CITIL for the long-term. According to Ravisankar, "A significant portion of our business is repeat business."

CITIL's revenues have risen steadily from US\$6 million in 1993/94 to over US\$33 million as on March 31, 1999. CITIL caters exclusively to the IT needs of the Banking and Financial services industry worldwide and hence 100% of revenues are from Banking solutions. Of the total revenues, 19% is generated in the ASPAC region (14% from South East Asia).

CITIL's customer base has risen from 37 in 1993 to over 202 as of June 1999. CITIL's customers comprise Retail and Corporate Banks, Stock Exchanges and Mutual Funds.

Recent Achievements of CITIL

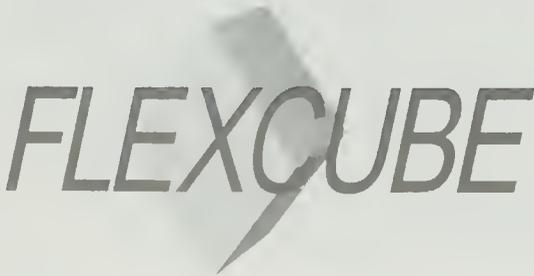
Some other recent outstanding achievements of CITIL are as follows:

- Two of CITIL's products (MicroBanker and FLEXCUBE) feature among the top ten best selling wholesale banking products in the world in 1998, as rated by International Banking Systems - UK.
- CITIL's MicroBanker crossed the 100 customer mark in terms of license sales in December 1998, with the current count standing at 110. CITIL is only the sixth banking solution vendor in the world to cross the century mark, and has achieved this milestone in the shortest period of time.

- CITIL's Universal Banking Solution – FLEXCUBE – has quickly achieved unprecedented success. Less than 20 months since its launch, more than 22 banks have already signed up, and 11 of them have already gone 'live' on the product.
- CITIL's banking solutions have been awarded the ITAA*2000 certification by the Information Technology Association of America – an independent verification of CITIL's capability to create Y2K-compliant products.
- CITIL is actively working to expand its network, and has already signed up 22 distributors covering 27 countries.
- In the arena of services, CITIL has established a Data Warehousing Centre of Excellence, with a pool of more than 100 professionals with expertise in this strategic technology. CITIL has also established an Internet Solutions Unit that focuses on Internet technologies and e-commerce. The company is in the process of setting up additional Centres of Excellence in the areas of Customer Relationship Management, and Java-based solutions for financial services.

Packaged Banking Software

CITIL provides state-of-the-art technology products to the banking and finance industry worldwide. The two main products are FLEXCUBE and MicroBanker.



Universal Banking Solution

FLEXCUBE

FLEXCUBE is the next-generation universal banking solution from CITIL. It is a technologically superior product, which automates all operations of a banking corporation including Corporate, Retail, Investment, Treasury, Mutual Funds, Investor Services and Asset Management. It also encompasses an integrated branch system and caters to a range of delivery channels that include Telephone Banking, Home Banking, ATMs, POS / Debit Cards and the Internet.

Its advanced capabilities include AAA Banking (Anywhere, Anytime, Anymode Banking), real-time Risk Monitoring, flexible General Ledger, a sophisticated customer information file and automated interfaces to standard electronic payment and clearing systems.

FLEXCUBE's unique product definition capability and rich parameterization ensures that the bank is able to create and launch new products instantly. This gives the bank a significant competitive edge, a vital need in today's business environment.

FLEXCUBE is a multi-currency system built on a powerful base of a flexible architecture. FLEXCUBE uses one of the world's most reliable and leading technology platforms. Developed on Client/Server distributed architecture, FLEXCUBE uses the Oracle relational database and offers unlimited freedom to the bank to choose any leading UNIX or Windows NT-based hardware. A premium OLTP system efficiently services the high volume retail transactions.

FLEXCUBE offers a number of features to help improve the operational efficiency of the Bank. Its integrated centralized risk management module helps the bank monitor its exposure to various customers and currencies on-line. FLEXCUBE's centralised processing capability helps the bank to organise efficient, optimal back-office operations with minimum operational cost.

MicroBanker

MicroBanker has been among the world's top Selling Corporate Banking Software applications since 1995, according to surveys conducted by International Banking Systems, UK. A proven integrated banking solution, MicroBanker from CITIL has the rare distinction of having more than a 100 banking customers which makes it only the sixth enterprise product internationally ever to have achieved this milestone.

In the last three years, CITIL has added 64 new banks as customers, which translates into one new bank signing up every three weeks. With banking technology created by bankers, it provides a readily available solution to banks opting to automate their systems or replace an existing automated system.

MicroBanker has the unique advantage of being an on-line and real-time system, complete with sound functionality to meet the most demanding requirements of small and medium sized banks. It caters to a spectrum of needs of corporate and investment banking and can meet a wide range of processing, information and management requirements, within a secure environment. Its modular design enables the bank to select and add

applications to meet its evolving business requirements. It finds easy acceptability by users and a resultant quantum leap in banking service levels, for a reasonable investment.

CITIL's customer-orientation ensures that every MicroBanker customer fully benefits in terms of utilization and enhancement of the product.

Turnkey Solutions and Consulting Services

In addition to products, CITIL also provides a range of customized IT Services to the financial services industry including Onsite/offshore software development, Strategic IT consulting, Business Process Re-engineering and Process and Quality consulting. Services span the functional areas of foreign exchange, treasury, securities trading, portfolio management, mutual fund operations and accounting, custodial and depository services, trust administration, derivatives trading and processing, risk management, ATM networks, Data Warehousing and Internet Banking.

Some typical areas of consulting are highlighted as follows:

Data Warehousing

CITIL has completed large, prestigious Banking Data Warehousing projects and established a Data Warehousing Centre of Excellence last year. This Centre, staffed by over 100 specialists, provides complete Data Warehousing services including conceptualization, design, development, support and specialised consulting. CITIL has executed over 55 projects in data warehousing with an unbelievable success rate of 100%.

Internet Solutions

CITIL has a specialized team focusing on Internet technologies. With rapid growth in the electronic banking scenario, Internet banking provides significant benefits in terms of convenience banking, expanded sales opportunities and reduced cost of operations.

Process and Quality Management Consulting

CITIL offers consulting services in the area of Process and Quality Management with the objective of assisting organizations attain higher levels of process maturity and quality.

The portfolio of services provided by CITIL, includes:

- Formal and informal assessments against the CMM Model
- Process and Quality management consulting including setup and implementation of process-quality practices, formulating organizational standards and procedures and conducting systems audit
- Training, including CMM, Total Quality Management (TQM), Project Management (PM) and Configuration Management
- FLEXIS, a specialized set of products and tools including a repository of world-class software practices and methodologies, Project Management and Monitoring system and a Defect analysis and tracking system.

Forthcoming Product Releases

CITIL is actively investing in new product development to meet emerging market requirements. A new Internet banking product – FLEXCUBE@ - and a ready-to-use Data Warehouse for banks – FLEXCUBE Information Centre – are under development and due for release later this year.



FLEXCUBE@ is an Internet banking solution designed to help banking and financial institutions offer products and services on-line in a secure environment. It has been designed to integrate with existing security implementations as well as leading third party off-the-shelf products. Performance related issues have been a key factor influencing the architecture design decisions. The architecture provides for integration with core banking systems.

FLEXCUBE Information Center is a pre-configured, ready-to-go information management solution that harnesses data warehousing technology and serves as a one-stop information repository. Information can be drawn from external and internal sources and be seen on a common platform. Thus effectively aiding in strategic, tactical and operational decision making. An open-ended platform with a flexible architecture allows for a choice of end-user tools and the capability to operate on any application.

Case Studies

Technology Upgrade Consulting

The Client: A Central Bank in the Caribbean.

The Challenge

The Client Bank is responsible for the entire gamut of central banking functions, including implementing banking policy, monitoring commercial banks, managing external debt and money supply.

Faced with tremendous growth in volume and complexity in the various areas of the business and a set of existing antiquated systems, the Bank felt an urgent need for an across-the board upgrade of the level of automation. The requirements included:

- Requirements specification for various functional areas
- Identification of automation resource requirements
- Evaluation and selection of computer hardware
- Evaluation and selection of software packages
- Customization and implementation of system
- Training of users and EDP personnel
- Implementation of office automation
- Extensive security control
- Improved MIS for senior management

CITIL Solution

CITIL was retained as consultants for the automation process. An initial strategic requirements study was conducted, which included a complete data model for key business areas. This was followed by an implementation phase, during which CITIL provided a comprehensive suite of consulting services, involving approximately 10 person-years of consulting effort. The project culminated in a successful, highly automated environment with immediate payoffs in employee productivity. The range of professional consulting services provided included requirements analysis, hardware configuration and selection, data centre set up, system tuning, software package selection for banking applications, package customization and enhancement, custom design and development of new systems, implementation of office automation, recruitment of data processing personnel and training for users and EDP staff.

Client Benefits

- Online access to up-to-date information
- State-of-the-art technology
- Office automation through electronic mail and workgroup software
- Quantum leap in employee productivity
- Enhancement of service quality
- Improved MIS reporting capabilities
- Fully trained user community and EDP personnel (160 in number)
- Complete transfer of know-how to in-house personnel, resulting in self-reliant operations.

Feasibility Study and Software/Hardware Evaluation for Bank Automation

The Client: A Leading Bank in the Middle East.

The Challenge

The Client Bank, running its 11 branches on legacy software and hardware, had plans for replacing these with a state-of-the-art solution. For this, it called in CITIL to conduct a Feasibility Study and thereafter assist it in the two-phases of its Replacement Plan. In the first phase of the assignment, which involved replacement of the Bank's front-end Branch systems, CITIL was required to bring out a comprehensive RFP and conduct a software/hardware evaluation of various vendor solutions. In the second phase, the Bank sought CITIL's help in preparing an RFP for vendors, for the replacement of its back-end Core systems.

CITIL Solution

The Feasibility Study was undertaken in two representative branches of the Bank. CITIL's study outlined the critical features of the existing legacy systems in objective terms, so as to enable decision-making by the Bank on issues of co-existence, customization of systems and Business Re-engineering. CITIL also carried out a focused review of the phasing options available to the Client and the comparative advantages. An Effort-Benefit-Risk matrix drawn up, duly considered the Bank's expectations of the implementation time-frames and phasing. CITIL's set of recommendations made to the Bank, included several significant suggestions for partitioning its Project for speedier implementation, along with the resultant benefits accruable at the different Project phases.

Based on the above study, a revised, comprehensive RFP was created for issue to vendors. Using a detailed evaluation methodology drawn up by CITIL, evaluation for selection of front-end systems was then carried out within a strict time-frame, on the basis of pre-defined quantitative criteria and with the complete involvement of the Users. CITIL's recommendations for an optimum solution for the Client were based on, both, a quantitative and qualitative evaluation of vendor offerings.

In parallel with the evaluation of the front-end system, an RFP for the host system was also created.

Client Benefits

- The detailed Feasibility study provided the Client with specific information required for decision-making on the phasing of its planned automation project.
- With its unique blend of banking expertise, technical knowledge and professional skills, CITIL provided the Bank a sound Evaluation Methodology, enabling an objective evaluation of the vendor offerings, for selection of an appropriate solution in keeping with the requirements of: functionality, schedules and related-criteria.

CUSTOMER APPRECIATION - EXTRACTS FROM LETTERS

"... Rabobank International's Global IT department has implemented CITIL's new FLEXCUBE system in the new office in Istanbul, Turkey.

... The implementation team praised the flexibility of the system, good reporting tools and the fact that it is all based on familiar technology.

... From a user perspective, the main compliments given were regarding the user-friendliness of the system, which guarantees a steep learning curve and decreases the human error percentage."

Niels Diehl
Head of Business Systems & Planning Group
Global IT Department, RaboBank International,
Netherlands

"I am delighted to inform you of the successful implementation of the Cards Data Warehousing project. I am particularly proud and pleased to have partnered with CITIL for this venture.

I am astounded by the commitment, dedication to the task and the energy that each individual has displayed to the cause. Your SEI-CMM 4 rated methodology has helped control and manage the Project well".

S. Ramakrishnan
Group MIS Director
Citibank, Singapore

" We feel good that we chose CITIL for implementing the FundsPower system. In relation to our competitors our market share has grown. One factor will surely be the efficiency of our systems."

Ms. Voravan Tarapoom
Managing Director - Thai Asia Mutual Fund Co.
Thailand

"In early 97, we realised we need to fix our Year 2000 problem and acquire a new engine to fuel our planned business growth. We choose CITIL's integrated solution for corporate and retail banking, FLEXCUBE, after a thorough analysis of systems from many leading international vendors. We are amazed by the flexibility and ease of use of FLEXCUBE. Additionally, CITIL's track record in implementing banking systems across continents was a key consideration in selecting CITIL. That assessment has been proved right: FLEXCUBE is live and running after only a seven month implementation period and supports our entire retail and corporate banking business.

We are delighted we chose CITIL as our technology partner and have recently bought CITIL's Web enabled solution. This will support our remote operations through the internet. CITIL's solution will certainly help us grow our business by leaps and bounds."

James Hoey,
CEO,
Federal Bank of the Middle East (FBME), Cyprus
and
Sean Hickey, Senior Vice President, FBME

Fiserv

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Company Background

Fiserv is a US\$1.2 billion financial service technology firm dedicated to assisting more than 7,000 clients in redefining banking and financial services through technology. Across Southeast Asia and in over 50 countries around the world, Fiserv applies over 20 years of experience and proven success to today's challenges in the financial services industry.

Fiserv CBS International has international operations supporting Canada, the Caribbean, Latin America, Europe, and the Asia - Pacific Rim. With offices in London, Poland, Singapore, Philippines, Indonesia, Australia, Mexico, Colombia, and Orlando, Fiserv CBS provides support to over 125 financial institutions.

The financial charters of these international clients range from multi-national banks and financial service providers, to private banks, finance companies, central or government banks, credit unions, building societies, and more.

The asset size of financial institutions in this international arena range from start-up organizations with little assets and facilities to multi-billion dollar institutions.

Based in Singapore since 1991, Fiserv has developed strategic technology partnerships with multi-national financial institutions such as ABN AMRO, Bank of America, KeppelTatLee Bank and the Westpac group. Fiserv has enabled retail banks, finance companies,

and credit unions to rapidly grow, take advantage of new market opportunities and streamline operations.

Today Fiserv employs 12,500 professionals, with more than 100 based in the South Asia region.

Historical Development of Product and Services

In 1986, Fiserv CBS International (then owned by Citicorp Information Resources) embarked upon the development of a purely international core banking system. Based on the extremely successful Comprehensive Banking System (CBS), which had been serving US community banks since 1983, the first version of ICBS was implemented in 14 global Citibank sites.

Each year since that time, more than ninety percent of ICBS system has been enhanced, with each release expanding capabilities for new industry requirements such as direct banking, credit unions, consumer finance, and wholesale banking.

In 1994, Fiserv CBS International launched the Alliant family of client/server delivery channel solutions. Alliant CRS and Alliant Branch Teller were specifically designed for financial institutions needing high-performance, integrated customer servicing and teller solutions. Since then, more than 40 clients have installed Alliant Branch Teller. Direct banks such as CIBC's President's Choice Financial and Prudential Banking Plc have used ICBS and Alliant CRS to quickly offer branch-free banking to a new segment of their market.

Business Development

Their history of over 80 successful acquisitions has been the engine behind the Fiserv growth story. It has helped them become one of the premier information technology companies in the financial industry, ranked number one by Forbes magazine for overall return to investors (1988 - 1999).

Fiserv CBS International has seen considerable growth in markets worldwide over the past three years, demonstrating the company's flexibility in catering to the financial services industry and the South Asia region. In Australia, for example, Fiserv delivered strategic technology solutions for the country's largest credit union, with more implementations planned. Fiserv was also selected by one of Australia's leading consumer finance organizations. The project encompasses the Fiserv ICBS and Alliant Front Office solution as part of a strategic replacement of core systems. This agreement sees the use of Alliant throughout nationwide call center operations.

In Hong Kong, Fiserv continues to help existing customers achieve their goals, one of whom has signed a new agreement to upgrade to the very latest version of ICBS as well as the introduction of a new call center using the Alliant Front Office solution.

With each upgrade of ICBS Fiserv customers enjoy a rich mix of functional enhancements that have been delivered into the base product through partnerships with some of the world's leading and most innovative financial service organizations.

Banking Solutions

Fiserv offers clients a strategic technology partnership that combines consultancy services and an integrated suite of core processing, channel management, and customer relationship management tools. Their solutions strategy is based on more than 15 years of experience in developing and implementing technology for financial institutions worldwide, allowing you to:

- **Put Service at the Heart of Your Business.** Armed with tools that enable you to truly understand your customers, you can anticipate their needs, take advantage of sales opportunities, and deliver a higher quality service experience. Whether your differentiation strategy is based on low cost or high value, the service experience is what will set you apart from your competition.
- **Quickly Match Products to Market Needs.** Whether it's for a global market, or a market of one, Fiserv solutions allow bankers, not programmers, the flexibility to create nearly any financial product they can conceive.
- **Deliver and Service Products with Maximum Convenience.** Fiserv solutions integrate delivery channel management, giving your customers immediate access to their finances from anywhere in the world, through their delivery channels of choice.
- **Discover Opportunity in Information.** Maintain a wealth of highly summarized data from which you can peer deeper into customer, organization, and financial information — to reveal customer usage patterns and buying preferences, and anticipate needs.

Fiserv's Key Strategic Differentiators

Fiserv has three key strengths that sets them apart from other financial services technology firms:

- **An unmatched implementation success rate: 100%.** Sadly, most banking technology organizations can't report such success. In South Asia and around the world, Fiserv is positioned as a global firm with the backing of more than 800 experienced banking and technology professionals in Singapore, Jakarta, and Sydney as well as from other branch locations (London, Warsaw) and at our Development Center in Orlando, Florida, USA. No other company in the world can match their success rate for implementations.
- **The tools to redefine 'banking'.** Across the globe, the notion of "banking" is changing. Banks want to act like finance houses. Finance houses are considering a direct model. And nearly everyone, it seems (including retailers) want a bank charter. By leveraging its global client base, Fiserv is able to apply the knowledge and experience gained in one market to the challenges of another. Today, Fiserv ICBS and Alliant solutions support operations as diverse as central banks, finance companies, large retail banks, credit unions, direct banks and many institutions in between. This flexibility keeps technology out of your way—allowing your business plan to drive your destiny.
- **The financial strength to support client partnerships.** One of the most stable and well-respected companies in America, Fiserv is backed by \$1.2 billion in revenues and the financial strength and commitment to reinvest in product research and development and maintain local presence in their key markets.

Reference Customers

Customer	Type of Institution	Solutions Provided	Business Challenges
CIBC President's Choice Financial (Canada)	Start-up Direct bank	Call center Core banking EFT/ATM interface Loyalty and Rewards Program	<ul style="list-style-type: none"> Acquire new customers with no-fee banking through the launch of a new banking brand Partner with an existing retailer Keep costs down by processing only electronic transactions Service clients only through phone, post, or Internet
Banco de Oro	Universal Bank	Core Banking Teller Application	<ul style="list-style-type: none"> Customer retention and acquisition Package selection Quicker customer response time Faster to market with new products
Australian Central Credit Union	Credit Union	Core Banking Channel Integration ATM/EFT IVR Call Centre Branches	<ul style="list-style-type: none"> Replace existing core banking system with ICBS to increase flexibility and responsiveness to new market opportunities and product innovations Implementation at ACCU was the first of a series of implementations for Australian Credit Unions

Case Studies

Canadian Imperial Bank of Commerce (CIBC)

CIBC is a well-established part of the Canadian banking scene, indeed, it is one of the country's top five banks. Since the electronic banking division of CIBC was set up three years ago, it has rapidly taken a leadership position in North America as a provider of electronic banking services both for CIBC customers and new banking brands. The primary aim of the initiative was channel migration, to move customers from the high cost branch channel to low cost electronic channels. Just three years later, 90% of all CIBC customer-banking transactions are through electronic channels with only 10% being conducted in the branches.

Already one of the top five on-line banks in North America, CIBC was challenged with finding ways to deal with the competition from new market entrants as well as exploiting opportunities available through new direct banking channels. At the same time, Canadian supermarket chain Loblaw was looking for new ways of generating revenue from its store space, and banking services delivered via in-store kiosks as well as by phone and the Internet seemed the ideal

solution. The two companies decided to join forces. CIBC would operate the banking services and pay a share of the revenues to Loblaw. The supermarket chain would supply strong branding through its President's Choice brand.

Well known throughout Canada, President's Choice is synonymous with premium products at a competitive price. Loblaw and CIBC have applied the same principle to the President's Choice Financial (PCF) banking service, which began its rollout in Loblaw store throughout Canada in spring 1998.

"We wanted to offer our customers a value proposition unmatched in the Canadian banking industry," says Anthony Jabbour, director of technology at PCF.

PCF has proved a big hit with Loblaw customers. As well as the savings and cheque account, borrowing account and a range of four mortgage options offered at the launch, PCF is now offering new loan and pension products as well as a Visa card.

From early on CIBC realized that to create a high value, low cost banking service, it would have to use technology to help its operating costs. After evaluating the banking software market, it decided that the Fiserv ICBS product could help them achieve this goal.

"The open, flexible ICBS architecture enables us to easily make modifications and enhancements without incurring major development costs, and because the whole system is parameter driven we can make changes quickly and cost effectively in response to market needs," says Jabbour.

CIBC also liked the range of add on products available from Fiserv, which provide extra functionality without the need for expensive custom development. It is using the Alliant suite, for example to provide call center support to the PCF product and service offering.

Through its association with Loblaw, PCF also offers an innovative loyalty and reward scheme on customer bank accounts for which Fiserv developed the technology. PCF customers can gain points for use in Loblaw stores, and similarly, Loblaw customers win points by using their PCF debit card to pay for goods, creating a strong cross-brand loyalty.

Fiserv brought its expertise in building large scale banking systems to the table, but just as important to CIBC was Fiserv's commitment to getting the job done.

"Some of the things we are doing at PCF have not really been done by many other banks before," says Jabbour. "We believed that Fiserv had the people we needed to help us make it work, and we were right." Fiserv worked in partnership with CIC throughout the PCF project, adding new functionality such as loyalty and rewards support to the ICBS system and integrating it with the existing CIBC infrastructure.

The flexible IT architecture CIBC has built using ICBS will enable it to rollout new products and new delivery channels with the minimum of effort; a powerful advantage in the cut-throat banking market of the 21st century.

Banco De Oro – The Philippines

Established in 1976, Banco De Oro (BDO) is one of the largest and most successful financial service organizations in the Philippines. As a Universal Bank, BDO offers its commercial and retail customers a broad mix of traditional retail and wholesale banking products as well as insurance, investment banking and credit card products.

As part of their regular strategic planning process the executive group of BDO identified two keys areas of focus for the banks future success. These were customer service and operating efficiencies. The bank also identified the importance of reducing product development costs and time to market. Following the 1998 strategic planning sessions BDO

embarked on a search for a new core banking solution that would support their efforts to overcome their business challenges. At the end of their 4 month study, BDO concluded that the Fiserv ICBS system combined with Alliant Branch Teller provided the best opportunity for the bank to achieve real success.

According to Mr Nestor Tan, President of BDO, the Fiserv solution offers two major advantages over the bank's previous banking systems. "Firstly, ICBS and Branch Teller provide BDO enhanced customer servicing features throughout our branch network as well as our existing and emerging electronic delivery channels. Secondly, the Fiserv ICBS and Branch Teller combination provides a totally integrated 'front and back office' solution, including integration with our other systems. This will enable BDO to process all banking transactions more efficiently, with greater risk and credit controls, and more complete management information."

With core system conversion completed in December 1998 and the first branch live in January 1999, only seven months after the start of the implementation project, BDO will rollout Fiserv ICBS and Alliant Branch Teller to the remaining 108 branches located throughout the Philippines. According to Mr Tan, "BDO chose Fiserv ICBS and Alliant not only because of their technological superiority but also for the company's excellent track record in the Philippines and the Asia Pacific region."

Fiserv ICBS and Alliant Branch Teller has significantly increased the banks ability to ensure the highest levels of customer service. "The centralized core system provides BDO with "total" bank-wide customer relationship management, ensuring that all staff and all channels share a consistent view of the customer which in turns enables better and more responsive decision making," stated Mr Tan.

Going forward BDO plans to position itself as a provider of innovative and competitively priced financial products and services delivered through a customer service experience unmatched in the Philippines. "In addition to enhanced customer service, the flexibility and automation of Fiserv ICBS and Alliant will provide significant savings in operational costs and new product development," said Mr Tan.

Fiserv ICBS and Alliant provide BDO with a total retail banking solution which is used by some of the world's leading and most innovative financial service organizations.

Fuji Xerox

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The Document Company

Fuji Xerox offers unrivalled expertise in the production and management of documents; color and black and white, paper and digital, across networks, for the small office/home office or the global enterprise. The company offers the broadest array of document products and services in the industry; copiers, printers, fax machines, scanners, desktop software, digital printing and publishing systems, supplies and comprehensive document-management services from the running of in-house production centers to the creation of networks.

The company adopted "The Document Company" as its corporate signature in 1994 to better reflect what has always been the real business of Fuji Xerox, document management. Fuji Xerox also adopted as its Logo a stylized "X" to depict the pixels of digital imaging, the foundation of the second office revolution.

Fuji Xerox believes that because documents store, move and transform knowledge, they are critical to a business. Fuji Xerox document solutions empower the organization by offering ways to do more things with documents -- whether they are digital or paper, color or black and white, networked or standalone. In addition to improving the quality of documents, Fuji Xerox' solutions enable the organization to improve its business processes -- reducing time and labour costs by eliminating many of the steps involved in document production.

Today, Fuji Xerox is the world's Number One document solutions provider, with worldwide revenues of US\$26.2 billion in 1998. Of that, around US\$6.8 billion were generated in Asia. In the region, the banking sector accounts for approximately 20–25 percent of the company's revenue, and this proportion is expected to grow over the next few years. Globally Fuji Xerox employs 122,000 people, with more than 15,000 based in the South Asia region.

Corporate History

The history of Fuji Xerox dates back to 1938 when Chester Carlson, a patent attorney and part-time inventor, produced the first xerographic image. In 1948, the word "Xerox" was trademarked for copiers and the term "xerography" entered the language. The Xerox Corporation was founded in 1961 after wide acceptance of the Xerox 914, the world's first automatic office copier to use ordinary paper.

Today Fuji Xerox is an industry leader and a pioneer of digital technology for every aspect of document management, helping its customers to take full advantage of the revolution in digital printing. Digital solutions started to transform the printing industry in 1977 when Fuji Xerox introduced the world's first high speed laser printers for computer generated database printing. Since then Fuji Xerox has continued to make major breakthroughs in digital printing.

Today, one of Fuji Xerox' most successful and innovative divisions is the Production Systems Group (PSG), which focuses on high-end printing and publishing systems for many industry sectors including banks and financial services.

Banking Solutions

Within the banking and finance industry, Fuji Xerox has had tremendous success in providing solutions, from data center printing to networking services, including monthly account statements, credit card transaction bills, general correspondence, customer contracts and general financial reports. Now Fuji Xerox is providing total solutions to meet customer demands in the banking world, from document consultancy (re-engineering of document strategy), creation, composition (including variable data), archival, retrieval, viewing and data-mining to web publishing and output management. For Fuji Xerox, every piece of information is a document, whether it is in digital or printed form.

X Today's Xerox Banking Solutions



Banks and financial services organizations depend upon documents to drive their business. Documents are often the "end product" which banks produce for their customers. Business documents also represent your company, promote your products and services, and are used to sell new services, formalize agreements and contracts, develop customer relationships, and collect revenues.

Documents are the media of
"Customer Communication"

.....

Effective customer communication
is the *objective* of the Document.

Does Your Company Provide Effective Documents?

Are your bills, credit card statements, account statements, customer correspondence, customer notifications, portfolios and contracts succeeding in driving your business and improving the bottom line?

How do customers react if they receive poor business documents? They may not understand the message. They may not respond or respond promptly. They may call the customer services department for assistance. Or they may just get annoyed and trash the document!

The quality of documents a bank sends out to its customers can have a big impact on every aspect of business performance. If the documents are not well produced, the results could be as follows:

Customer Services: Customer services will receive an unnecessary number of calls and your staff will waste a lot of time responding to queries. You may even lose your customers and the corporate image will suffer.

Marketing: The impact is a lost opportunity to grow market share. If customers ignore the statements and bills you send, you lose the chance to cost-effectively promote other products and services and increase revenue.

Finance / Accounting: Your cash flow will suffer because of remittance delays and an increase in outstanding accounts receivable. It also costs much more to follow up on customers who do not pay on time.

Administration and IT: Additional and unnecessary costs will be incurred to rectify and re-process documents that are returned to the organization.

Document Solutions

Fuji Xerox has a wide range of high technology solutions to help banks and financial services organizations improve the efficiency and effectiveness of their documentation. These solutions will not only help to minimize the impact of poor documents on the organization but provide competitive advantage, enabling you to leverage cross-selling opportunities, reduce costs, and increase profits and customer satisfaction.

Re-Engineering and Design of Document Strategy (Workflow)

Fuji Xerox specialist consultants will help you analyse your document workflow throughout the organization and suggest strategic solutions. They will discuss your business requirements with all of your internal users, addressing every issue from customer administration to corporate image. Fuji Xerox also provides comprehensive document solutions for those companies which have implemented enterprise resource planning and now need an efficient and effective printing strategy.

Document Creation and Composition

Fuji Xerox offers a wide range of easy-to-use GUI software to extract customer variable data and produce composed text and consolidated information for client communications.

Printing and Finishing Equipment

Complete document printing and finishing systems from the host or network database to printing and mailing equipment, with complete print and mail integrity and audit systems.

Archival, Retrieval and View

Complete integrated document management systems with archival, retrieval and viewing software.

Web Publishing

Software to publish bills, statements, etc., on the World Wide Web, with integration into the archiving system. EBP software for presentation and payment services.

Data-Mining

Software tools to extract and analyse data, compose one-to-one marketing campaigns and customer loyalty programmes.

Output Management

Complete document output management and control systems.

Enterprise Resource Planning (ERP)

Fuji Xerox also offer a wider range of solution to enhance ERP printed output and forms with variable data and highlight color.

Xerox Business Services

Today, many organizations are considering outsourcing of document management activities so that they can concentrate on their core business. Fuji Xerox is the world leader in providing document management outsourcing. A strategic business unit of the Production Systems Group, Xerox Business Services (XBS) provides outsourced document services and solutions to over 5,200 clients in more than 50 countries, generating annual revenues in excess of US\$2 billion. XBS is Fuji Xerox' fastest-growing organization, meeting the explosive increase in demand for outsourced document services and facilities management (FM), which are handled at customer sites or through a worldwide network of Fuji Xerox Technology Centres. XBS also includes Xerox Professional Services which provide customized services to support enterprise IT networks.

Case Study

Korea Financial Telecommunication & Clearing Institute (KFTC)

Executive Brief

The Organization: The Korea Financial Telecommunication & Clearing Institute (KFTC) is a government company based in Seoul. It manages the country's bank giro system and provides a range of electronic banking services.

The Environment:

- Host computers: UNISYS 2200 running OS/1100 and Tandem Himalaya fault tolerant servers
- HP server for AFP print file generation
- Image Statement Printing (ISP) System integrated with BankTec Image Capture System

The Requirements:

- Solution for processing bank giros, including scanning and sorting
- High-speed production printing of statements for distribution to banks
- Printers that can operate transparently in an IBM AFP-IPDS environment
- Enhance productivity, speed up distribution of statements and reduce manpower

The Approach:

- Fuji Xerox Korea proposed a cut-sheet solution, rather than a continuous-feed printer, and ensured compatibility with AFP-IPDS

The Result:

- Five high-end DocuPrint printers

The Benefits:

- A high-speed, high-quality printing solution which is easy to manage
- Enhanced productivity, streamlined workflow, automatic processing, and faster turnaround

Account Background

The Korea Financial Telecommunication & Clearing Institute (KFTC) plays a pivotal role in clearing checks and managing the country's bank giro system, as well as the development of electronic funds transfer systems. Its key objective is to ensure the accuracy and speed of delivery of financial information to banks.

Environment and Applications

The core activity of KFTC is the processing of bank giro payments. The KFTC collects the giro documents from almost 14,000 bank branches throughout Korea and sorts them for settlement, processes the data and distributes the financial information to the banks. A team of 30 people processes the giros, rising to 60 at peak time. Manual processes involved in the sorting and distribution of statements had resulted in mistakes, long lead-time and use of excessive manpower.

Requirements

The key objective of the KFTC is to improve the accuracy of information, speed up delivery and reduce costs. This would be achieved by automating the processing of giros, using an Image Processing System (IPS) so that statement images are scanned and stored electronically, then processed using an OCR reader to consolidate the data for printing and distribution to banks.

The KFTC based its new system on a proven solution used in Sweden and Norway, with an Image Statement Printing System integrated with a BankTec Image Capture System.

Selling Strategy

Fuji Xerox Korea sales representative Lee Sang Heon worked with BankTec's Korean distributor, Chung-Ho, to develop an AFP printing solution.

Chung-Ho suggested a DocEye ISP system for capturing and sorting statement images, generating AFP print files, managing and monitoring AFP resources, and printing on cut-sheet paper. The host systems were a UNISYS 2200 running OS/1100 and a Tandem Himalaya running Guardian, with HP servers used to generate and manage AFP resources and an IBM RS/6000 running PSF/AIX as a print server.

A project team at Fuji Xerox Asia Pacific then suggested using a DocuPrint IPDS Printing System, to ensure compatibility with AFP-IPDS. The DocuPrint was new technology to Fuji Xerox Korea, which formed a sales team to develop a solution to meet local needs, including the development of double-byte (Korean) characters.

Installation

The project team overcame several obstacles during the implementation, including the development of Korean fonts for DocuPrint. They also had to scale the images to save disk space used on the server, and sent two Fuji Xerox Korea systems analysts and a Chung-Ho engineer to Sweden for a month to carry out tests, using real data, to develop a working solution.

The next major challenge was to boost print speeds to over 500 pages per minute. Five Fuji Xerox high-end DocuPrint systems were installed and went operational in February 1998. They now print five million pages a month, six days a week from 9pm to 6am.

The Results

The success of the project is clearly evident. The KFTC has been able to reduce the number of administration staff since the system went live. Productivity has been boosted along with the speed of processing and printing. The quality of printing the Korean Hangul characters has also been improved drastically by the introduction of the Fuji Xerox high-end DocuPrint Printing Systems.

Year 2000 compliance



Many organizations today are focusing their efforts on readiness for Y2K. Fuji Xerox continues to work with its current and potential customers to ensure their systems are ready for the year 2000.

Organizations are focused on ensuring that they can continue business through the millennium, collecting and issuing bills, statements and other mission critical documents to their customers.

Fuji Xerox, apart from guaranteeing its systems are fully compliant, will provide expertise and support services to help companies in confirming total systems readiness. Look for the Fuji Xerox Y2K compliant logo.

Oracle

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Company Background

Oracle Corp. (Nasdaq: ORCL) is the world's second largest software company and leading supplier of solutions for Internet-enabled information management. With annual revenues exceeding US\$8.3 billion, the company offers its database, tools and application products, along with related consulting, education, and support services, in more than 145 countries around the world.

Headquartered in Redwood Shores, California, Oracle is the first software company to implement the Internet computing model for developing and deploying enterprise software across its entire product line: databases and relational servers, application development and decision support tools, and enterprise business applications. Oracle is one of the few companies capable of implementing end-to-end enterprise IT infrastructure and integrated application solutions, specifically for the financial services industry on a global scale.

Solutions for an Information Powered Institution

Oracle has built a comprehensive information management solution specifically for the financial services industry. It supplies Architected-Best-in-Class capabilities that can be integrated into evolving management processes and information systems. Its

open, modular architecture aids in a rapid return on your technology investment, allowing you to implement the components you need, when you need them.

Oracle has designed its solution to become the foundation for the information-powered institution. Knowledge-driven management is supported through a tightly integrated suite of decision support applications, including: profitability, risk, database marketing, and planning. Oracle Financials ledger applications deliver a complete infrastructure for operational management, integrated with the decision support suite. Knowledge-driven service is supported through on-line banking and electronic commerce applications, and easily integrated with call center installations. At the core of the solution is a robust enterprise technology framework.

Oracle Financial Services is designed around fundamental disciplines:

Strategic Enterprise Management: Driving key business decisions using best practices with an integrated and comprehensive view of profit and risk dynamics.

Customer Relationship Management: Re-engineering the customer management process through diverse channels of distribution.

Finance & Operations Management: Delivering business control through tight integration between the accounting and MIS departments.

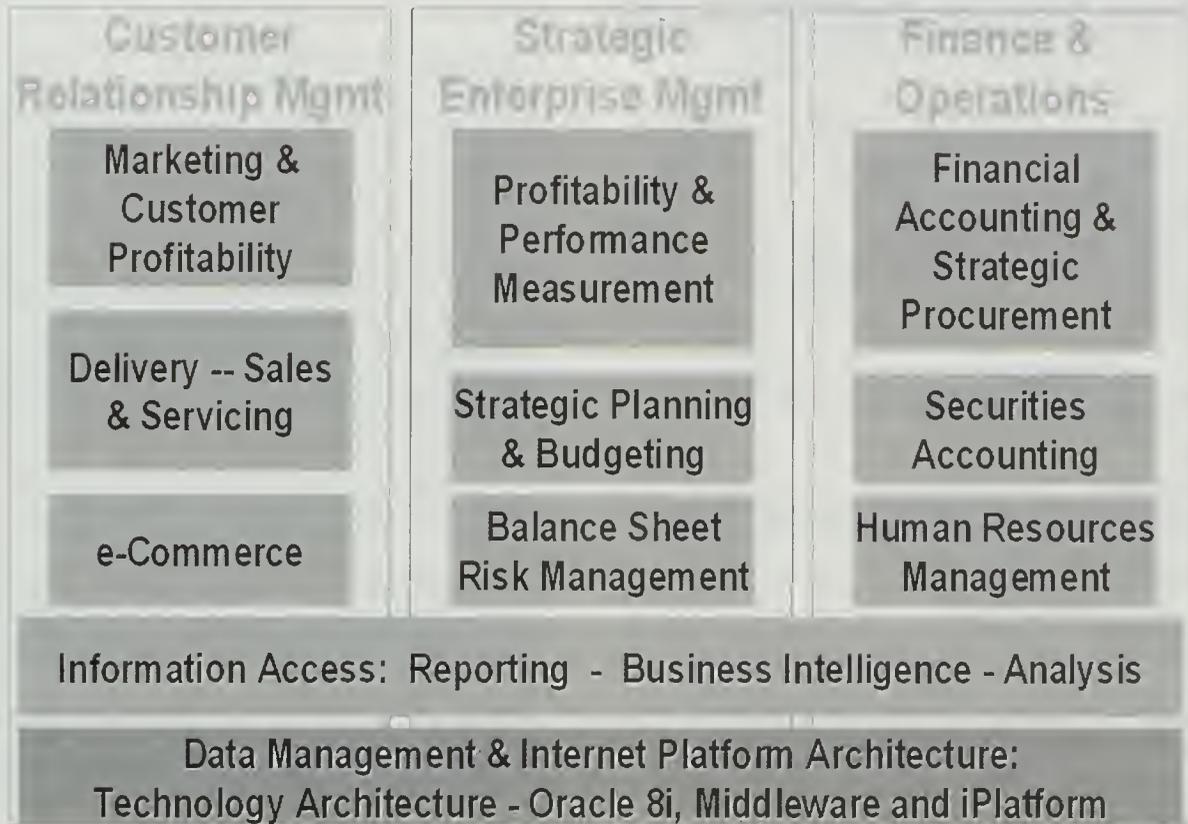
Electronic Commerce

Oracle can help customers build a complete range of on-line banking services. Applications for bill presentment, bill payment and strategic procurement deliver powerful capabilities to transform customer banking relationships and reshape the economics of banking.

Call Center and Sales Force Automation Integration

Integration of the rich store of customer information with customer call center and other customer interfacing systems further extends the power of targeted, one-to-one marketing and the Oracle Financial Services solution.

Oracle Solutions and Technology



Oracle Financials

At the core of operational financial management is the Oracle General Ledger application solution, which provides a complete environment for financial control and reporting. Full multi-currency support and specific banking functionality deliver the capabilities required for global scale institutions. Integration with accounts payable and receivable, payroll, human resources, and fixed assets system components round out the picture of complete financial management.

Oracle's Financial Services Product Lineup

The comprehensive capabilities of the Oracle Financial Services solutions are delivered by six world-class analysis products:

- Oracle Performance Analyzer
- Oracle Budgeting & Planning
- Oracle Transfer Pricing
- Oracle Risk Manager
- Oracle Market Manager
- Oracle Financial Data Manager

Oracle Performance Analyzer

Oracle Performance Analyzer links ledger, statistical, and account-level data to develop comprehensive profitability information at the customer, product, and business unit levels. Performance Analyzer supports multiple approaches to the development of costing and other allocations, risk-adjusted capital allocation, risk-adjusted performance, and production of measures such as RAROC, EVA, and activity-based costing. Allocations can be applied to ledger and summary results tables, as well as individually to accounts, customers and transactions.

Oracle Budgeting & Planning

Oracle Budgeting & Planning is a comprehensive budgeting and planning tool that is simple to use yet offers the modeling complexity required for accurate forecasting. It uses detailed account-level information to allow sophisticated cash-flow based planning. Actual data, including cost and other allocations developed by Oracle Performance Analyzer is integrated with forecast data to support comparison of plan versus actual.

Oracle Transfer Pricing

Based on the same powerful cash flow modeling engine as Oracle Risk Manager, Oracle Transfer Pricing supports the industry's most comprehensive range of transfer pricing methodologies, including the ability to handle components of transfer rates such as liquidity and basis risk. It helps managers determine the account level spread earned on assets and liabilities, and the spread earned as a result of interest rate exposure. Results and methodologies are also integrated with Oracle Risk Manager and Oracle Budgeting & Planning.

Oracle Risk Manager

Oracle Risk Manager is an asset/liability management model that employs account-level data to support structured interest rate risk analysis, balance sheet forecasting, and market valuation. Every loan, deposit, investment, and portfolio security can be measured and modeled individually, using both deterministic and stochastic methods. Oracle Risk Manager makes use of the results delivered by other Oracle Financial Services modules, such as Transfer Pricing and Budgeting & Planning.

Oracle Market Manager

Oracle Market Manager incorporates an extensive customer data model, combined with comprehensive database marketing capabilities. Its relationship linking functionality allows managers to identify account, customer and household relationships. Combined with the institution's financial data, the data model provides a complete picture of customer economics. Oracle Market Manager data can be shared with Oracle Performance Analyzer and Transfer Pricing modules to allow clients link profitability metrics with its multi-tiered targeted marketing campaigns and other customer management activities.

Oracle Financial Data Manager

The Oracle Financial Data Manager consists of a data model, a balance and control module, and a database administration module.

The data model contains an extensive set of data elements, including account, processing results, transaction and statistical, relationship, ledger, and historical data. The Balance & Control module is a data validation, correction and reconciliation tool that resides in the Oracle data model. The Administration module adds comprehensive data management and security functions. It offers security at many levels and supports custom table creation, table extension, and load management processes.

Case Studies

Bank of Asia, Thailand

Bank of Asia, a 59 year old bank with more than 150 billion Baht in assets, has gone live with Oracle Financial Services Solution, last October in the area of decision management that drives the bank's profitability goals. As part of the major initiative, Bank of Asia expected to better analyze customer and product profitability and dramatically improve its budgeting, forecasting and strategic planning processes. The Oracle solution will also enable the bank to adopt a knowledge driven business approach allowing better risk management and higher profits. Oracle Financial services solution also enables the bank to adopt a knowledge-driven business approach that will allow it to better manage risk and profit. For example the bank will use the integrated solution to improve its asset/liability ratio and reduce risk.

Westpac Banking Corporation, Australia

In 1995, Westpac Banking Corporation -- Australia's oldest financial institution, as well as one of the country's largest financial services organizations -- faced two major challenges.

First, there was the technological challenge. The bank is one of the world's top 100 banks, with a balance sheet of roughly \$100 billion, 1,600 points of representation, 31,000 employees and 7 million customer accounts. To try and keep track of all its enterprises the bank had 13 ledgers drawing on 80 sources. It took a staff strength of 57 people and an expense line of \$5 million per annum just to reconcile and transfer data within the bank.

Second, change was cultural, with ominous competitive implications. Due to the large number of ledgers, and the consequent difficulty in reconciling the numbers across lines of business, Westpac had no 'official' store of customer, account and profitability data that had demonstrated integrity. To address this problem Westpac built an Oracle Data Warehouse and integrated it closely with Oracle Financial General Ledger, Profit Manager and Risk Manager. This solution suite now serves as the foundation for an environment where information on any transaction, by any customer, through any channel is available whenever and wherever needed. This integrated system, now handling about four billion records and 56 million transactions per month, is the reliable data source for all of Westpac's management applications.

Of all commercial entities, banks have the most data, but the least usable information on customer behavior. To solve this paradox, Westpac has teamed with Oracle to create a financial services organization with two new characteristics.

1. The bank now has an environment in which crucial information on customer behavior and profitability is readily available.
2. Westpac has used that information environment to change the focus of the bank from branch accounting and the requirements of internal process to the proactive shaping of service offerings on the basis of what people want from the bank.

Sema Group

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Company Background

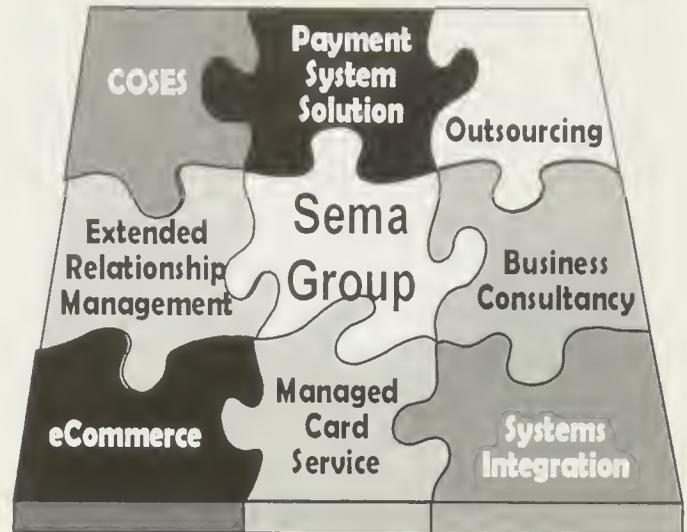
1958 saw the creation of Société d'Economie et de Mathématiques Appliquées (SEMA) in France. In 1962, Cap (Computer Analysts and Programmers) Group was created in the UK. Sema Group was formed in 1988 from the merger of Sema Metra (France) and Cap Group (UK).

Today, Sema Group is a leading global services firm employing 18,300 people world-wide and with global revenues of £1.25 billion. It has operations across Europe and Asia, as well as North America, South America and South Africa. Office locations in Asia include Singapore, Malaysia, India, Taiwan, China and Hong Kong. Their Asia/Pacific headquarters, and largest Asian office, is in Singapore.

In 1998, Sema Group entered the FTSE 100 share index and was also awarded a technology partnership contract by the International Olympic Committee and became the Technology Systems Integrator for the 2002-2008 Olympic Games.

The Group's main business activities are outsourcing, systems integration, consulting and specialist software products. They work across all the key sectors of the economy, notably in telecommunications, defense, industry, energy, banking, finance, commerce and services, and the public sector.

Sema Group's Solutions for Banks



Payment Systems Solution

From their understanding of the competitive pressures which drive the card business, Sema Group delivers payment systems solutions which help you sustain real business advantage.

When you are implementing an information system which has a major, strategic impact on your business, you need to know you are in good hands.

Sema Group serves financial institutions worldwide. Their expert teams are dedicated to developing and supporting your card business. As a reliable and experienced partner, they have the resources to help you create a practical and robust solution, even under time pressure.

Sema Group offers an integrated approach to helping you specify, design, build, implement and support flexible card management systems: allowing you to concentrate on differentiating yourself in the highly competitive and fast-moving global market.

With dedicated payment systems offices across Europe and the Asia/Pacific region, Sema Group has extensive experience in providing card and merchant management systems to fit the diverse requirements of different locations, markets, economies and organizations around the world.

Sema Group has over 30 years experience in providing market leading *products* and *business consultancy* to the global payment systems marketplace.

Credit Card Management

Sema Group provides the leading integrated credit card management solution in the Asia Pacific. Currently used by more than 100 customers in the region, Sema Group's card management solution has a proven track record of providing the most complete and flexible system for managing card transactions.

A market leader in the field, Sema Group's card management solution interfaces with Visa, MasterCard, and JCB networks for authorization and interchanges transactions. This together with Sema Group's experience and continuous provision of compliances, ensures that customers are able to implement the latest changes in the shortest possible time.

The Sema Group Payment and Card management solutions are modular in design, giving the flexibility and choice to select and package the different modules in the way that best suits your unique needs and requirements. Utilizing middle ware and the wide suite of modules enables the customer to start up with a basic system of core modules that can grow with your business needs.

With the capability to provide for a wide range of functions the Sema Group Card Management solution supports double byte and is available on both AS/400 and Mainframe.

Electronic Delivery

Customer Oriented Solution for Electronic Systems (COSES)- a result of Sema's years of experience and extensive research in electronic delivery, switch systems and the card business. COSES has been developed to provide a highly flexible, easily expandable solution for both conventional and emerging electronic banking channels. With COSES, banks will not only be able to support ATM, POS and phonebanking, but also the exciting Internet banking, electronic commerce, call centre, wireless-commerce and much more.

Electronic Commerce

Sema Group's Electronic Commerce Solution is based on the Secure Electronic Transaction (SET & SSL) protocol which offers Internet merchants and financial institutions a way to securely process transactions from virtual stores. With the Sema Group family of products you can ensure secure end-to-end payment solutions that facilitates the easy movement of transactions between merchant, customer, and acquirer.

XRM- Extended Relationship Management

In addition to its comprehensive range of products and services, Sema Group also has extensive experience in Extended Relationship Management to help you maximize your valuable customer relations. Sema Group offers Call Centre solutions and personalized Internet solutions: a natural fit with their systems integration expertise.

Providing all aspects of support and customization to facilitate the strategic management of your Call Centre. From CTI installation and integration to host interfacing, technical support and user training, Sema Group offers tailored system integration for all Call Center business applications.

Sema group also offers personalized Internet solutions that allow you to customize and target the individual needs of your customers by utilizing customized Intranet and Web-based applications.

Expertise in Financial Systems

Sema Group has been working with banks and financial markets for over 30 years, and can call on the experience of its finance and banking specialists. In the dynamic world of banking and finance, the Group's activities include strategic and management consultancy, system integration, technical assistance, software development and information technology master planning.

They have focused expertise in integrated information systems, capital markets, merchant and savings bank automation, electronic funds transfer and card payment systems.

Sema Group has also assisted clients in addressing the new opportunities created by the internationalization and deregulation of markets, the diversification of banking products, the change in merger and acquisition policies, and the challenges associated with new technology developments.

Benefits of Working with Sema Group

Sema Group, as one of Europe's largest software suppliers, has demonstrated its long-term viability as a supplier of financial systems in the international marketplace. This ensures the continuous support and upgrade of the product. With 30 years of experience in providing financial systems to retail banks and supporting the card system software since 1986, customers will undoubtedly reap the benefits from this vast experience.

Sema Group provides ease of implementation. Products can be installed and available for training in a matter of days. Sema Group is well regarded in all regions for its customer service and the flexibility of its software and industry solutions. Another key strength of Sema Group is their progressive philosophy which allows them to keep pace with new market developments, which is very important in a dynamic industry such as finance.

Sema Group's has a wide ranging business network and their key partner includes: Baan, Broadvision, Bull, CableData, Compaq, Computer Associates, Dell, Forte, Hewlett Packard, Hitachi Data Systems, IBM, ICL, Informix, Microsoft, Oracle, SAP, Siemens, Sun Microsystems, Sybase, and Vantive.

Strategic Positioning

Sema Group can help any organization in Asia/Pacific looking to maximize their information technology investment by identifying, creating, delivering and sustaining value.

They are especially strong in delivering value in four key industries:

Banking and Finance: Sema Group helps its customers meet the challenge of a constantly changing world. The Branch Systems, Payment Systems and Smart Cards they have developed rely on their fundamental values: innovation, experience, resources and flexibility.

Services and Transport: Sema Group helps its customers to make a full use of information technology in order to cut down costs, improve quality and expand offerings. Their customers here include a broad variety of sectors such as insurance, rail transport or traffic control. They also provide information systems to major sporting events, such as EURO96, the 1998 Kuala Lumpur Commonwealth Games and the Olympic Games.

Public Sector: this sector is committed to delivering high-quality, responsive services to everybody. To meet these objectives in a changing environment, Sema Group has a flexible approach to management structures, people, processes and technology.

Telecommunications: Sema Group has successfully developed a range of solutions for this fast growing sector, from fixed networks to cable and satellite TV services. Mobile telecoms are at the forefront of this success, with the Group establishing itself as a world leader with its Intelligent Network Services and Customer Care and Billing products.

Case Studies

EON Bank Credit Card Centre

Implementing card business requires a comprehensive implementation plan to ensure that the key decisions and planning considerations are identified. The effect of these decisions and plans is measured in terms of time sensitive schedules, costs, equipment and personnel requirements.

Sema Group assisted EON Bank in establishing its Credit Card Centre, following the Key Tasks outlined below.

Project Planning

In order to set - up a Credit Card Centre within a relatively a short period of time (i.e., 4 months), a comprehensive project plan and strategy was established. This was to co-ordinate and to streamline all project activities and ensure prioritization towards the targeted implementation date.

A team which consists of representatives from SEMA Group as well from the Operation Unit, Credit Unit, MIS Department and the Authorization & Collection Unit of EON Bank was created with responsibility to table-out a comprehensive task list and to assign specific responsibilities along with starting and ending dates for the major tasks.

The following are the essential components of the Project Planning:

- Business Parameters And Customer Operational Support
- Third party System Interfaces
- Fraud Management
- System Training And Testing

Fraud Management

Throughout the development stage, security is a high-priority area. It is important to ensure that the bank is protected from any activities that could lead to fraud asset.

Conservative security parameters and fraud detection software were installed to assist in fraud detection, fraud patterns and prevention.

System Training and Testing

The working team was given comprehensive training and orientation, which included extensive documentation.

Once the implementation of a card centre is completely the real work begins of building a business around an operational oriented system that produces a large volume of transactions. Efficient utilization of state-of-the-art systems and software are essential to efficiently processing large transaction volumes.

A Leading Asian Bank

One of Asia's foremost banks is currently using COSES as a full-fledged front-end online switching and authorisation system for all external connectivity and electronic banking channels management. The Bank's retail banking and credit card system concentrates on core banking processing such as account management, backoffice processing, G/L, MIS etc.

Some highlights of the service provided by Sema Group are:

- ATM management – in excess of 850 machines
- ATM card issuing, management and authorisation - 4 million
- Full credit card issuing and authorisation - 200,000
- Merchants and POS/EDC - more than 5000
- Self-Service Banking Management for Internet and Smartphone:- the Bank use COSES to process internet transactions that allow online real-time air-ticket booking utilising credit card and ticketless check-in at the airport;
- Connects to International network - VISA, MasterCard, CIRRUS, PLUS
- Connects to local network - shared ATM network
- Processes daily transaction volumes of 700,000, peak of 1,200,000

System Access

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Company Background

System Access is a global solutions company that provides New Order Financial Institutions with enabling application technologies that support the complete value chain of customer-based e-processes necessary in the networked economy.

System Access is a privately held company, the shareholders including E.M. Warburg, Pincus, a major U.S.-based global private equity investment firm and the management team. The organization is a global software solutions company addressing specifically the needs of the banking industry. With offices in Singapore, London, New York, Manila, Bangkok, Dubai, Bratislava, and Beijing, System Access is the provider of SYMBOLS, an integrated scalable advanced technology system for retail and wholesale financial services institutions. System Access has approximately 300 people around the globe serving the needs of customers in over 20 countries. Software manufacturing facilities in both Singapore and the Philippines provide cost effective customization and development support to on-site local consultants in the delivery of complete end-to-end solutions around the world.

The company was first established in 1983 developing custom solutions for banks, evolving through the '80s until creating the first product in 1990 addressing Treasury requirements. The '90s has seen the development of a complete integrated suite of

products covering Universal Banking requirements, using the most advanced technology environment. The company has always been profitable and having invested significantly in product development is now rapidly growing revenues in line with establishing a global presence.

Banking in the 21st Century

Networks and enabling technologies are changing everything, lowering the cost of entry allowing global competitors and non-traditional non-banking organizations to enter historically protected markets. Customers have more choice than ever and are raising their expectations of financial institutions in meeting their unique needs, requiring anytime, anywhere, anyhow access to their financial information. Contrast this to the application systems and technology found in many banks today. Such software was originally designed and constructed in a time of efficient accounting of debit and credit entries against a "one size fits all" financial product offering – the concept of a customer was not even defined in these product accounting driven organizations of the past.

In the 21st century, the customer's requirement is the product, and unless a bank develops its business processes, both front and back-office around the needs of the complete customer relationship, it will have difficulty surviving on a long-term basis. Much of the underlying application software that determines the business processes in banks, whether developed "in-house" or available from software vendors, was developed in the '70s and '80s. This is a period in time which was pre-Internet, pre-channel proliferation, pre-financial industry convergence, pre-customer focus, pre-globalization (regionalization), and pre-open technology. Fundamentally, how could such software address the needs of the surviving *e-Banks* as we move into the 21st century? The answer is that it can not.

In summary, the financial services industry is going to be radically different than it is today. Given the inherent technology nature of this industry, banks will need to determine how they can reinvent their technology and business processes around the customer in order to survive. This is where partnering with System Access can help.

SYMBOLS

SYMBOLS, a software solution designed and constructed in the age of the Internet, meets the requirements of retail and wholesale banks regardless of their size. It was designed around an architecture

that supports an i^{+1} strategy of Integration, Independence, Innovation, Intelligence and of course the "plus1" being electronic delivery over the Internet or any other channel.

The scope of SYMBOLS functional coverage addresses the following areas:



Integration around a single view of the customer relationship enables significant business and technology productivity benefits that can be obtained with its direct impact on the Bank's efficiency ratio. This also reduces costs. It increases revenues through improved service, more effective cross-selling and improved retention. It also improves profit margins based on greater intelligence. Studies of organizations that have achieved this level of customer centricity have shown organizations to be 60% more profitable than product-centric organizations.

Horizontal integration is achieved through a Customer Relationship Foundation that provides access to all products and services being used by the customer. This information being delivered through a Delivery Channel Integrator ensures consistent personalized customer treatment across all delivery channels whether face-to-face, via telephone or electronic self-service.

Vertical integration achieves "Straight-through-Processing" from business acquisition through customer account servicing through knowledge creation, for example, on risk-rated customer profitability. Effectively, there is a closed-loop feedback system of "action-impact-knowledge-action".

Independence enables each area to exist independently to facilitate co-existence with other 3rd party technology. This is required from a business perspective to support 3rd party delivery channels or 3rd party products that are not specifically manufactured or owned by the bank. In addition,

SYMBOLS integrates with other applications that a bank continues to use enabling a low-risk evolutionary approach for migrating from a product to a customer centric business model to be achieved at a pace with which the Bank is most comfortable and ensures the lowest risk.

Innovation enables banks to remain creative in meeting the unique needs of their customers and doing this at "internet speed". The rapid pace of change in the banking industry requires new products and services to be created in days, not weeks, and for technology to direct customer interaction based on today's information, delivering this stellar level of service while improving profitability and lowering risk. The underlying application technology has to be based on re-usability, parameter based business and technology rules definition, extreme flexibility and ease of use without sacrificing the need for efficient performance. Additionally, the underlying technology has to be completely "Internet" ready to provide total functionality to anyone anywhere at any time over Inter, Intra and Extranets.

Intelligence, not transaction processing is the business that banks are in today. Once costs have been driven down through re-engineering of operational processes, it is the banks with the greatest intelligence and has the ability to deliver this knowledge to their customers and employees that will achieve significant competitive advantage. This not only means creating insight into customer behavior, but also achieving an in-depth understanding of the return on investment down to the business unit level and lower, while managing Key Performance Indicators aligned with the Bank's strategic and tactical goals, that will determine the winners. However, analysis and understanding has limited use unless it can be deployed at the point of customer interaction to effect both the behavior of customers and employees alike.

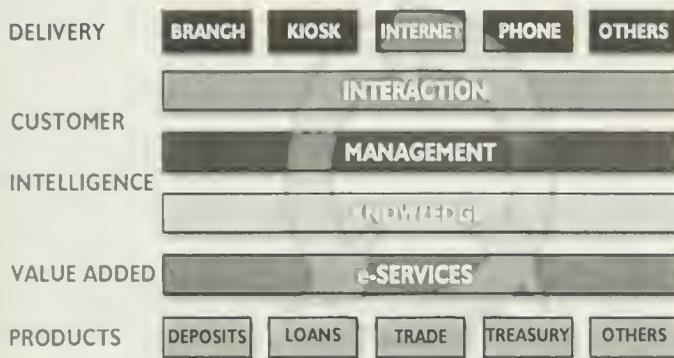
Internet-enabling positions the New Order Financial Institutions for maximizing opportunities in "e-commerce" and "m-commerce", enabling banks to become value-added intermediaries between buyers and sellers. Achieving this is not about simply putting a browser-based front-end on product accounting systems. It is about reinventing front-to-back business processes enabling **e-processes for e-customers for e-business**.

A crucial attribute in achieving the "e-commerce" vision, is to move beyond servicing the immediate customer to create a true value network by connecting the customer's customers. At this point the bank is no longer just providing a customer service but is integral to driving the customers' revenue growth, cost

reduction and improved margins – now this is real value.

These “e-Services” require new non-traditional banking applications such as Bill Presentment and Payment, Information Streaming Services, enhanced transactional management and other services to be delivered over the net to essentially provide an extended value network encompassing the Customer, the Bank and its partners.

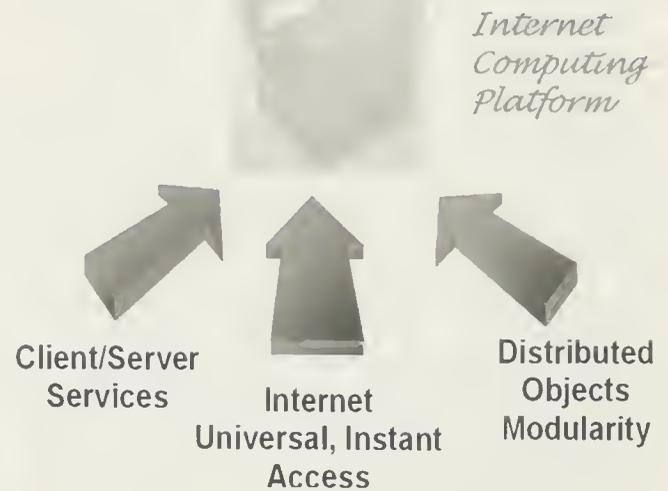
SYMBOLS provides for the processing requirements of consumer, wholesale and treasury lines of business through the following architecture:



Internet Computing Platform

The New Order Financial Services organization of the 21st century will be selling financial and other products to its customers via a number of its own and 3rd party channels. Essentially, these organizations provide a financial ecosystem for its customers to manage their complete financial affairs. This value network, where the Bank becomes the primary aggregator, can only be achieved through a foundation technology platform designed to support the networked processing needs of both a completely centralized view of the customer relationship and a completely distributed provision of product and service.

SYMBOLS has been developed using fourth generation rapid application development tools and follows an Internet Computing Platform strategy being executed by the major relational database providers driving by far the majority of Internet e-businesses. This architecture allows the complete front-to-back functionality within SYMBOLS to be extended over Inter, Intra and Extranets. Thus, the acknowledged low cost benefits of Internet processing can be extended to the Bank's employees, to customers and to “partners” in their provision of products and services.



Lowering the Cost of Ownership

Technology is a significant and growing expense for financial institutions given that the Banks with the most empowering technology will be the survivors as we move into the 21st century. One of the primary factors in driving up technology costs has been “proprietary lock-in” where institutions are locked into a specific proprietary technology making it difficult to move to potentially more cost-effective alternatives. This creates a non-competitive environment whereby prices are often higher than they would otherwise be.

An “Open” technology environment supports a standards approach whereby technology can be designed to support continued choices in order to avoid this “lock-in”. Unix and Java are two such technologies designed to operate in multiple environments. SYMBOLS will operate on Windows NT and any hardware that will run Unix, which includes IBM, HP, Sun, Compaq/Digital and others. As such, whether the bank needs to establish one processing centre or needs to meet the requirements of multiple processing centres, the technology platform that makes the most sense at the right price at the right time can be chosen.

Scalability

Until recently, larger financial institutions were restricted to the robust reliability and capacity capability of larger mainframes which have been established over the last 30 years. Now companies such as IBM are incorporating the lessons learnt from their vast mainframe experience into server technology such that the largest of banks can now begin to incorporate application server technology within their mission critical transaction processing architecture. A recent benchmark of SYMBOLS

processed transactions at a rate in excess of 230 per second against a 15 million account base – overnight batch processing was achieved in two and a half hours. As the Internet continues to drive global businesses, the “open” technology environment will become a de-facto standard regardless of the size of an individual business. It is this “open” world that reduces the cost of technology while significantly improving technology responsiveness to business demands.

Reinvention, Transition, Evolution

While the competitive landscape and customer expectations in the world of banking have changed radically over the past 25 years, the pace of change continuing to increase, the fundamental underlying applications technology in banks has remained the same. This environment is a major competitive constraint in a bank’s ability to compete, inflates cost structures, impedes market responsiveness and essentially allows global competitors and “non-traditional” market entrants to take a bank’s most profitable customers.

Evolution, not revolution, is the soundest approach to migrating to this brave new world of financial services. System Access provides services to create implementation strategies that will move a bank’s legacy environment from a product-centered architecture to one focused on the customer in a low risk step-by-step approach. Each approach is unique to an institution, but the objective is to begin achieving the undoubted business benefits of customer focus in the short term while conserving the legacy investment and most importantly minimizing initial impact. Subsequently, the legacy environment can be replaced in an evolutionary manner ensuring minimal risk to the banks customers and employees. In this way, the focus is on additional market-visible business value that introduces new technology while providing a route map to get to the future.

Whether transitioning a traditional “bricks and mortar” bank or establishing a parallel direct operation, unlocking value is the concern of any senior executive who is looking to reduce costs, improve customer service and increase shareholder value. Buying commodity software products that provide a system but has minimal effect on empowering the business is a poor investment. System Access provide an advanced scalable integrated software solution wrapped in a “value-based” consulting package that concentrates on unlocking substantial value for its customers. Their Software-enabled services solutions align technology with business strategic objectives to increase revenues, reduce costs and increase margins while enhancing the customer experience.

Case Studies

Bank Rakyat Indonesia

Bank Rakyat Indonesia is in the process of re-inventing itself as a customer-centered financial services organization. As Indonesia emerges from the Asian financial crisis, bank re-structuring is a major issue. As a government institution and one of the largest banks in Indonesia it is also taking a number of smaller institutions under its wing. Thus, the Bank was faced not only with the task of moving their legacy technology from distributed to regionalized and centralized but also with the need to absorb these additional banks as part of their overall technology architecture.

The Bank is in the process of converting approximately 300 branches to the SYMBOLS application software which will eventually process 15 million customers and accounts. Once the initial urban branch take-on is accomplished, a further 4,000 sub-branches will be added. Bank Rakyat Indonesia is in the position of being able to make a quantum leap in its technology architecture directly to the Internet-based computing model and will undoubtedly be one of the most advanced business and technology banks in the region, if not the world, once the conversion is complete.

International Exchange Bank, Philippines (iBank)

International Exchange Bank, Philippines (iBank) – was first established in 1995 with a vision to provide service excellence in their chosen fields as they seize every challenge to make a difference for the customer. Just four years later, the bank operates 51 branches throughout the Philippines using SYMBOLS as the basis for processing deposits, loans and trade finance.

Given the bank’s start-up nature and the need to compete aggressively for profitable customers, technology was critical to the bank’s eventual success. Needing to attract demanding customers with high expectations while keeping technology costs in-line with the investment capabilities of a start-up institution, the bank has demonstrated significant success in its home market.

SYMBOLS was chosen as the technology engine to drive the banks growth because of its flexibility in delivering differentiated financial product offerings, its customer centricity, and the system’s ability to scale as the bank inevitably grew. In addition, SYMBOLS offered an “open” technology platform that would allow the bank to make technology choices well into the next century as opposed to being “locked in” both technically and financially.

Unisys

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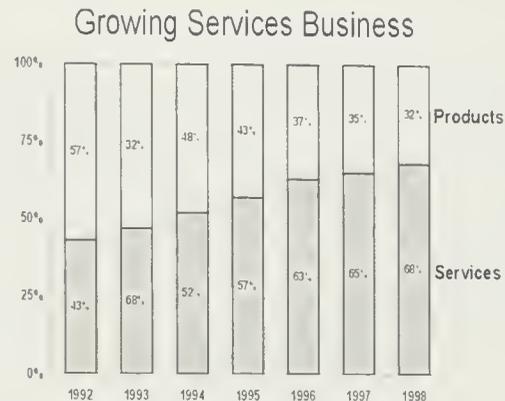
Company Background

The 112-year history of Unisys is one of creative, technically excellent, tenacious people -- people helping businesses and governments apply information technology to achieve new levels of competitiveness and success.

Today, Unisys is more than 33,000 employees helping customers in 100 countries apply information technology to solve their business problems. Unisys solutions are based on a broad portfolio of global information services including electronic business, systems integration including custom and "repeatable" application solutions, outsourcing, Microsoft Windows NT services, network services, and multi-vendor maintenance and support, coupled with enterprise-class servers and associated middleware, software and storage. Repeatable solutions are focused on key vertical markets including financial services, transportation, telecommunications, government, publishing, and other commercial markets.

In 1998, Unisys Corporation posted worldwide revenues of \$7.2 billion, of which the service organizations contributed 68%. This reflected a 9% increase over the previous year 1997 total revenues. The Asia Pacific group contributed 14% and was highlighted as one of the areas of strongest revenue growth. Unisys' financial goals are to grow revenue at 10% per annum in 1999 and 2000.

The services business continues an upward growth path in Unisys, as reflected in the graph below.



The keys to Unisys success in the Services Industry are:

- Focus on "repeatable solutions" for core markets: Financial Services, Government, Communications, Transportation and Commercial.
- Vendor-neutral approach through integration of best-of-market systems and components from leading vendors.
- Full range of support services for networks and desktops from technology selection and consulting to implementation and maintenance.
- Best-of-class global seamless infrastructure provides consistency in service delivery across the globe.

As Unisys shifts their business more and more towards services, attracting and retaining talented employees is an imperative. They are aggressively recruiting – seeking to fill more than 6,000 positions world-wide for skilled personnel who can deliver billable services. In the Asia Division, Unisys has approximately 1,450 employees. More than 50% of these employees focus on Financial Services in various roles including marketing, sales, delivery and support to their focused markets.

Main Activities

<i>Their focused markets</i>	<i>What they do best</i>	<i>Why they do it</i>	<i>Some specific solutions & services</i>
SERVICES			
Systems Integration & Solutions	Integrate "best of breed" information solutions and technology into systems that support their customers' most critical business operations.	The need to integrate new and existing hardware, packaged and custom software, and networks into complex systems continues to grow. Unisys add value to their core integration expertise by bringing specialized know-how in areas like document imaging and customer care to systems they're designing and delivering.	<ul style="list-style-type: none"> ➤ Consulting ➤ Services to bring Windows NT to the enterprise ➤ Year 2000 ➤ Document imaging ➤ Electronic business ➤ Call center ➤ Customer loyalty
	<i>Repeatable Solutions</i> Deliver a portfolio of proven solutions – comprising services, software, and multi-vendor hardware – targeted at select vertical markets.	Repeatable solutions are the emerging mantra of the industry because they are cost-effective to deliver and have a proven track record. Unisys have the reputation for industry and technology expertise necessary to thrive in their focused markets.	<ul style="list-style-type: none"> ➤ Banking and insurance ➤ Public sector ➤ Airlines and airports ➤ Communications ➤ Publishing ➤ Supply-chain management
	<i>Custom Solutions</i> Deliver information services tailored to large, complex environments for clients in their select vertical markets.	A number of client engagements – often because of their sheer size and complexity – will require that Unisys apply their core industry and technology expertise to fit highly customized environments.	<ul style="list-style-type: none"> ➤ Custom data center consolidation ➤ Integrated justice information systems ➤ Social services systems ➤ Custom solutions
Outsourcing	Design each outsourcing engagement to a service level appropriate for this client – which can run the gamut from managing client operations out of Unisys' service centers to working along-side clients at their sites.	Outsourcing core and non-core operations to a trusted vendor let businesses focus on their critical issues. Unisys have the physical and intellectual resources to step up to the task.	<ul style="list-style-type: none"> ➤ Program and systems management ➤ Application support ➤ Business-process outsourcing ➤ Internet services
Network Services	Provide support services such as consulting, integration, and onsite and remote management for distributed networks and desktops – for virtually any technology from almost any vendor	The growth of distributed networks and desktop systems is creating a host of challenges for businesses. Unisys built an unmatched infrastructure that tightly integrates all their services so they can effectively support every aspect of their clients' managed services requirements.	<ul style="list-style-type: none"> ➤ Network and desktop consulting ➤ Local- and wide-area network integration ➤ Remote network management ➤ Desktop configuration and integration ➤ Desktop asset management ➤ Help-desk support
Multivendor Maintenance	Maintain network and desktop products from many vendors on a global basis.	The proliferation of multi-vendor environments is creating growing client demand for a single point of contact for maintenance services. They've built on their competencies with Unisys proprietary products to become technology fluent on virtually any equipment.	<ul style="list-style-type: none"> ➤ Support for multi-vendor servers, PCs, printers, monitors and other peripherals, plus routers and hubs ➤ Support for multi-vendor software ➤ Unisys proprietary system support ➤ More than 10,000 desktop and networking supplies
TECHNOLOGY			
Enterprise-Class Servers	Develop high-end servers that are scalable, highly available, easily manageable, and secure enough to run in demanding environments – environments that are high volume, mission critical, and composed of different operating systems.	The growing dependency of businesses on IT is creating rising demand for highly available systems that are both efficient and economic. Unisys are delivering such systems by basing their servers increasingly on Intel's technology and Windows NT. To this foundation, they add their knowledge and experience building enterprise-class systems that can interoperate within different environments.	<ul style="list-style-type: none"> ➤ Clearpath servers, which integrate proprietary and "open" platforms ➤ Powerful Windows NT servers with enterprise-class attributes ➤ Value-add system middleware to power high-end servers
Specialized Technologies	Design innovative hardware and software that are specialized for specific applications	Unisys are focused on select areas where their systems and/or components have a solid reputation and market share as well as a good potential for growth.	<ul style="list-style-type: none"> ➤ Payment systems for centralized and de-centralized environments ➤ Tools and middleware for electronic business applications ➤ Object management software ➤ Storage products ➤ Natural language and voice-processing systems

FINANCIAL SERVICES SOLUTIONS

YOUR PRODUCTS

RETAIL BANKING

TCBS Modern, totally integrated retail banking solution.

COMMERCIAL BANKING

URBIS Global, commercial banking solution.

PAYMENT SOLUTIONS

VISUAL IMPACT, VISUAL REMITTANCE, OLCS Conventional and image processing for check and remittance, enhancing with third party best-of-breed relationships.

IMAGING & WORKFLOW

INFORMATION/COINSERV Improved information and work process management with image and workflow.

CARDS

UNICASH, UNICARD Card management and processing.

YOUR PROCESSES

FINANCIAL SERVICES

CENTERS EXCELLENCE Strategically location throughout Asia and the world, providing full support for Unisys products and services

TEAM 2000 Focus on IT Systems, Embedded Systems and Supply Chain with full suite of services for Business Continuity Processing, Project Review Health check, Project Management, Testing Services and array of Year 2000 Ready servers and solutions

YOUR CUSTOMER MANAGEMENT

CUSTOMER RELATIONSHIP MANAGEMENT

Solutions for the changing product, delivery and service needs of your customers and customer segments.

CRMS Provides common logical data models that allow you to quickly turn analysis into action using internal and external data

COUNSELOR Provides a common view of the customer across all channels enabling consistent customer service in those channels.

TELEPHONE

COUNSELOR Provides arrange of business functions derived from partnerships with world-leading CTI providers.

YOUR CHANNELS TO MARKET

BRANCH

FINESSE 2000 Enables your branches to respond effectively to customer requests and processing of financial transactions

COUNSELOR Enables your CSRs to target and management the sales process and conduct effective relationship management.

INTERNET

NET BANKER Provides secure, browser-based Internet banking capabilities for immediate responsiveness via virtual tellers.

MOBILE

COUNSELOR Provides secure, browser-based Internet banking capabilities for immediate responsiveness via virtual tellers

... HELPING YOU ACHIEVE BUSINESS SUCCESS

UNISYS

Financial Services Solutions

The Unisys suite of banking solutions is extensive and implemented throughout the world. Financial Business Architecture (FBA) represents the Unisys methodology for identifying the business needs of their clients and satisfying these needs with world class enabling technologies. FBA consists of the five core components that will define the financial services industry in the twenty-first century: Customer Information, Delivery Channels, Service Diversity, Internal Business Management and Electronic Commerce.

Navigator

Navigator is a dynamic, fully integrated suite of retail delivery applications designed to assist clients in providing consistent, superior service at lower cost than traditional interfaced methods by delivering common information and targeted product

recommendations across channels. Navigator is helping scores of leading financial institutions around the globe to build and maintain long-term relationships with customers by offering reusable functionality and universal consistency, across channels, for:

- *Branch Operations*, providing sophisticated capabilities as part of a proactive sales and service environment
- *Call Center Operations*, including capabilities for inbound sales and service and outbound telemarketing campaigns
- *Internet Banking Operations*, empowering your customers to interact with your institution via PC – whenever and wherever they wish
- *Mobile Service and Sales*, allowing you to address your customers' requirements in their homes or offices.

Navigator makes it easier for your channels to sell ... and for your customers to buy. You can achieve optimum customer service by gaining the following benefits across your entire delivery network:

- Convenient access for customers
- Understanding of individual customers' situations
- Effective automation of the sales process

Alternative solutions may give you some combination of these elements but can't deliver them all simultaneously across channels. None of these items can reach its full potential without the other two.

Together, they give you competitive differentiation.

Urbis

Urbis is a comprehensive business portfolio for a wide range of banking services and functions, including foreign exchange, money market, securities, futures, options and swaps, risk management, commercial loans administration, core banking processing and corporate treasury. These modules can be implemented to meet your specific business requirements.

Urbis has been developed through close collaboration with Unisys clients – banks and financial institutions throughout the world. As such, it is a proven solution built to answer the very stringent, fast-paced demands particular to banking operations.

- *It's Real Time* – all transactions are reflected in real-time, which gives you immediate access to accurate, up-to-the-minute information.
- *It Offers Centralization of Your Operations* – the central database at the core of Urbis can be accessed from any specified location, enabling you to centralize your business operations if you require. This multi-operational control can be utilized for central settlement or treasury business for a positive impact on infrastructure costs.
- *It Provides Straight Through Processing* – Urbis can be used for a wide range of business functions from deal capture through to settlement and back office management.
- *It Works with the Best* – Interfacing with the best-of-market products from a range of Unisys partners ensures industry leading support for a range of specialist business areas, including risk management, performance measurement and portfolio management.

TCBS™

The Complete Banking Solution™ puts your retail bank in tomorrow's information technology environment today. Almost every bank knows the time, money and effort expended when traditional systems must be redesigned for changes or additions. This is because these systems are process dependent – built around transactions and reports that are apparent only when the system is first designed or implemented. When those processes undergo future changes, major work is usually required. With TCBS, as additions and changes occur, the database allows for flexibility and rapid response, giving you a technological and competitive advantage.

TCBS is unique because it replaces both mainframe systems and combinations of mainframe and PC networks with client/server technology. It supports all your institutions' core-processing requirements – including deposit and lending account processing, and customer information reporting.

- Transactions performed at the branch level are processed instantly and committed immediately to a central database. Once stored, data can be accessed quickly and configured into a myriad of comprehensive reports and analysis.
- New products and services can be added, or existing capabilities revised, in minutes.
- The reduced maintenance requirements of the system, along with its' ease of use, more efficiently utilize your staff and training resources.
- The implementation of TCBS is a cost savings opportunity. Hardware, software and maintenance costs are substantially below what you are paying now.

TCBS and The Complete Banking Solution™ are registered trademarks of Open Solutions, Inc.

Payment Solutions

Unisys has been providing payment systems imaging solutions to the financial industry for over 32 years. During this time, they have developed a vast product line of solutions, for cheque and remittance ... solutions that meet your needs and the needs of your customers today and in the future. Their partnerships with major financial industry clients enable them to identify and react to market trends, anticipating them before they become dire needs for clients.

The combination of their vast experience and strategic partnerships has made Unisys the financial services leader in payment systems. Here's the proof:

- Unisys technology processes more than half the world's cheques.
- Unisys has more than 60,000 clients in over 100 countries. Among these are 41 of the world's top 50 banks.

Unisys solutions range from desktop encoders to large scale Image Item Processing and Image Remittance Systems. The Unisys Common Application Programming Interface (CAPI) software allows for seamless movement from one platform to another. With this open platform concept, a client can effectively "scale" the hardware speeds to meet the challenging needs of volumes, application environment and overall processing requirements. Unisys maximize their client's productivity, lower their costs, and provide superior customer services. Their suite of software and hardware solutions is such that both small and large institutions can benefit and grow with these solutions.

Infolmage Folder and Coinserv

A document imaging system needs to meet more than your basic requirements. Designed on this premise, Infolmage Folder provides you with the sophisticated tools and processing capabilities to continuously improve performance – from the minute you start using it. In production imaging environments, Infolmage Folder lets you transform high-volume repetitive processes into streamlined workflows.

Wherever your daily operations demand reliable, high-volume production processing, Infolmage Folder can:

- Increase productivity through immediate, simultaneous access to complete and accurate electronic file folders
- Speed processing through a customizable desktop user interface that supports the way you do business
- Improve customer service through faster response and more efficient operations
- Enable integration with legacy systems and applications for interactive information processing
- Reduce overall processing costs through automated document management and workflow

The Unisys COLD (Computer Output to Laser Disk) solution is the Coinserv product from INSCI Corporation. It recently was named Product of the Year in the COLD/ ERM (Enterprise Report Management) category by Imaging and Document

Solutions magazine. COINSERV for Windows NT is an integrated suite of products. It includes electronic archival and retrieval, document and report management, workflow management, imaging, data mining and other functions that facilitate such pacesetting applications as processing electronic commerce transactions using Internet-enabled documents.

CRMS (Customer Relationship Management Solution)

The financial industry of today is fiercely competitive, with new entrants continually driving down margins. Your organization's success depends on its ability to build and maintain long-term, profitable relationships with the right customers. CRMS allows you to pull together, standardize and maintain complete customer profiles, including demographic, sociographic, behavioral and product/service purchase history information. CRMS is made up of a set of integrated applications designed to help you derive maximum value from your customer information. Applications include:

- Customer Warehouse Advisor (Data Model and Data Warehouse Tools)
- Campaign Advisor
- Profit Advisor
- Sales Advisor
- Relationship Advisor

You can implement the integrated CRMS applications as a complete cross-functional solution, or one at a time, to serve the immediate needs of specific departments as you evolve to the complete solution.

Customer Relationship Management Solution is a system-integrated solution from Unisys based on Customer Relationship Management System (CRMS), a product of Ardent Systems.

Reference Customers

Customer: **Citibank, N.A. (Singapore)**
 Solution Provided: **Visual Remittance (VR)**

The image-based VR solution is used to provide the processing needs for the bank's outward clearing requirements for the following products and services: Credit Cards, Ready Credit, Loan Payments, and other payments to Citibank. Images of checks are captured, along with the code line, which is then transmitted to the clearinghouse for bank clearing. Citibank is also utilizing VR for Lockbox Services and managing a portion of their inward clearing process.

Customer: **United Overseas Bank (UOB) (Singapore)**
 Solution Provided: **CRMS**

Using a phased approach, UOB is embarking on creating an enterprise-wide warehouse solution which will support activities ranging from risk management, marketing and sales and profitability measurement. The first phase of the project assists the bank's Commercial Lending department monitor loan performance and manage risks through provision of timely management information. The second phase enables the bank to perform customer selection and segmentation, and to execute focused database marketing campaigns based on data mining analysis and user defined criteria.

Case Study

First Pacific Bank (Hong Kong)

Solution: **Navigator**

Competing in one of the most dynamic business environments in the world, First Pacific Bank is attracting newly affluent retail customers, adding new products and growing revenue. Foremost among the reasons for their success is a customer-first banking philosophy that stresses knowledge of both customer needs and the local economy. The result is personalized service and innovative products that have enabled all of First Pacific Bank's businesses – community banking, business banking, real estate finance, and asset-based finance – to perform very well.

Management maintains high productivity through careful planning and the use of the latest technology. Business volume has increased and new branches are being opened without increasing the number of employees. By centralizing many key functions, the bank enhanced customer services at the branch level while simultaneously lowering transaction costs.

In 1996, First Pacific Bank moved decisively to client/server technology with a graphical user interface (GUI) for tellers and customer service representatives. Navigator was installed throughout the bank's network of 27 general and specialty branches. The bank embraced the change enthusiastically by basing its new system on Microsoft Windows NT, becoming the first bank in Hong Kong to run financial applications on this platform.

As explained by Egbert Chan, Vice President for IT, Navigator for the retail branches was selected to be the first application installed because it easily integrates with other applications, such as decision support, call centers and wholesale banking. He stressed that integration of applications is essential to be competitive today. To be effective, today's branch application must bring information to the point of customer contact. Said Mr. Chan, "A customer may come in who is only making a deposit. Perhaps that customer has the potential to be a homeowner. We need to know that information in order to decide what we should offer to this customer. That way, we can make the most of the potential of each customer."

Anticipating user needs, the First Pacific Bank team chose Navigator and Windows because of the user-friendliness of this popular environment. Technically, the team was impressed by the object-oriented features of Navigator, which make it easier to customize and enhance the retail delivery solution. "Another decision factor," said Mr. Chan, "was the long history Unisys has in the region, and especially their strong support team in Hong Kong. They also have a strong support group based in the Philippines. This is what set them apart from other vendors."

Looking ahead, First Pacific Bank plans to use its modern branches, creative products and customer-first philosophy to continue to attract upwardly mobile customers. As Hong Kong's trading, manufacturing and engineering companies grow and more people enter the ranks of professionals and managers, First Pacific Bank plans to be ready to offer them products and services that suit their unique needs.

INPUT Services For Executives

INPUT conducts a variety of research-based projects for decision makers. Projects are selected in consultation with sponsors, and focus on topics of high and immediate value to sponsors. The value proposition of IT buyer projects is that they are based on original research as opposed to opinion

Projects cover the following IT and business sectors:

- Electronic Commerce
- Electronic Banking
- Electronic Government
- Enterprise Application Solution
- Internet & Intranets
- IT Customer Services & Support
- IT Operational Services

INPUT's decision maker projects:

- Enable vendor selection based on organised data from research with active buyers and users
- Support buying decisions on systems, software, services and processes
- Provide data, analysis and advice for strategic and tactical planning
- Support communications on industry developments and strategies with users, vendors and management

In addition, INPUT offers the following services:

- Extensive analysis and assessments of the world's leading IT vendors
- Comprehensive programmes of market forecasting for all leading IT markets worldwide
- Custom research projects
- Client presentations

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